

The Commonwealth of Massachusetts

1046

ANNUAL REPORT

OF THE

TRUSTEES

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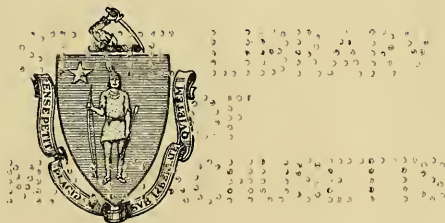
WORCESTER STATE HOSPITAL

FOR THE

YEAR ENDING NOVEMBER 30,

1936

DEPARTMENT OF MENTAL DISEASES



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WORCESTER STATE HOSPITAL

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#### TRUSTEES' REPORT

*To His Excellency the Governor and the Honorable Council:*

The Trustees of the Worcester State Hospital respectfully submit the 104th annual report of the hospital together with the report of the Superintendent, Dr. William A. Bryan, and report of the Treasurer, Miss Margaret T. Crimmins and other statistical information.

It is the duty of this Board to direct the attention of your Excellency to certain fundamental considerations that have influenced the management of the hospital during the year. The discussion of details will be found in the report of the Superintendent. We heartily endorse his statements and subscribe to his recommendations. It has been and is now the opinion of the Board, that the citizens of the Commonwealth want a hospital in fact as well as name. By this we mean a hospital where the first consideration is treatment which will tend towards early and permanent recovery. It seems obvious that such a policy will eventually bring the State to the point where there will be need for fewer mental hospitals, whereas a policy of considering the work of the institution on the sole basis of low per capita cost will create an ever increasing demand for greater bed capacity. Your Trustees have conducted the hospital with this policy ever in mind. We believe in the principles of active and skillful medical work with patients, in the continuance of educational activities, the constant raising of the qualifications of personnel, and increase in the number of graduate nurses, further extension of the research program, increase in the number of patients in boarding homes and the enlargement of child clinic facilities. We believe in these principles because, in our opinion, they will lead to better results than would a less aggressive method of handling the mental disease problem. These results will not only become apparent in money but in the sum total of human happiness.

In carrying out such policies the hospital has been under a great strain during the past five years because of insufficient funds. Your Board recognizes the necessity that has caused this condition of affairs but it cannot refrain from pointing out the consequences of a continuation of the policy. The Board does not wish to be held responsible for the maintenance of a higher standard of care and treatment than is possible to achieve with the money granted. We believe in high standards for the reasons given but they are impossible of attainment without some investment of funds. If such standards will lead to an increased recovery rate the investment will be amply justified. But it is a self-evident fact that a twentieth century hospital cannot be successfully carried on at nineteenth century costs. The Board can only bring standards as high as the appropriations allotted will permit.

The attention of Your Excellency is also directed to the fact that increased appropriations alone will not solve the problem. This money must be expended wisely and with due regard for the financial load that taxpayers have to bear. To do this requires the services of personnel that is experienced in the management of mental hospitals. Hospital administration is a highly specialized branch of medicine and men have to be trained in all of its intricacies. The restrictions that come with the requirement that personnel must be selected from the Commonwealth



make it exceedingly difficult for officials to secure a sufficient number of properly experienced individuals who are competent to carry on these treatment policies. It is our opinion that a hospital is no better than the people who are employed to manage it. Buildings will not function by themselves nor can wards be controlled properly without good nurses. Therefore, in addition to more liberal appropriations the question of more and better trained personnel must be considered.

We have been particularly concerned about the matter of food for both patients and personnel. In the opinion of the Board the method of computing the food budget on the basis of patient population alone is unsound. We recommend that a basic ration be established, the cost of this to be ascertained at the current prices and the total budget figured on the total population, including patients, employees and special students who are in the hospital for a temporary period.

The attention of Your Excellency is directed to the question of building maintenance. The money appropriated during the past five years has been insufficient to keep the buildings up to a proper standard of efficiency. It is recommended that a simple cost system for minor repairs be established in order that the sum for these essential repairs to the physical plant be allotted on a basis of the actual needs of the institution.

The Board desires to express its appreciation of the work of the officers and employees of the hospital during the trying period through which we have passed. They have been diligent and loyal and have served the Commonwealth faithfully and well. We again register our satisfaction with the policies that have been continued throughout the year of making the working goal of the institution the discharge of patients. We believe in the principle of utilizing the resources of the hospital for education of students in mental hygiene, for research in the various forms of mental disorder and hope that there will speedily come an extension of the out-patient facilities for both adults and children in order that widespread preventive work may be done.

Respectfully submitted,

WILLIAM J. DELAHANTY  
ANNA C. TATMAN  
JOSEPHINE ROSE DRESSER  
JOHN G. PERMAN

JOHN T. McMANUS  
JOHN L. BIANCHI  
ROBERT R. PORTLE

*Trustees.*

### SUPERINTENDENT'S REPORT

*To the Trustees of the Worcester State Hospital:*

I herewith respectfully submit the following report of the hospital for the year ending November 30, 1936, it being the one hundred and fourth annual report.

As has been the custom in former years the bulk of this report is made up of the reports from the several departments of the hospital. They cover the work of the year in considerable detail and any elaborate discussion of them would be superfluous. The medical service continues to function as a separate unit of the hospital. By this I mean that the responsibility of the medical service is delegated to a special group of internists and nurses. It is not in any sense isolated but is a tool for the use of psychiatrists in studying the relationship between the mind and body. In addition to this, the care and treatment of acute illness among patients and employees is an important function.

Our facilities for carrying on efficient medical and surgical work are still quite inadequate although some improvements have been made during the year. The nursing personnel should be increased on the medical service to a ratio of one nurse to five patients. This ratio should be maintained at all times and sufficient personnel added to allow time off duty and vacations.

Renovation of these sick wards is imperative in the interest of better care of physically ill patients. Better provisions for the treatment of tubercular patients should be made. The facilities for food service leave much to be desired. An elevator should be installed to permit the transfer of patients from one floor to another, in addition to the transportation of food carts. Medical equipment of a modern type is needed, and the entire operating suite needs renovation. The amount of work carried on by this service is enumerated in the detailed report, and is an excellent index of the medical needs of the patients in a mental hospital.

One of the important needs of psychiatry is a comprehensive evaluation of the treatment facilities that are afforded by the mental hospital. There is a tendency to get into a rhythm in doing certain things and continue to do them simply from an historical point of view. It is our opinion that every administrative process of the mental hospital should be carefully and thoroughly studied in order that we may actually evaluate the usefulness of each department in the treatment and recovery of patients. The entire program of the hospital is becoming more and more a therapeutic one with the recovery of the patient as the ultimate end.

The program of placing all the industrial work of the hospital in the category of occupational therapy has been continued with what is believed to be increasing success. As our experience has accumulated it is possible to better fit the patient to the job and keep the assignment on the basis of the need of the patient for the occupation rather than the necessity of the institution for the patient's labor. The beginning of occupational therapy is on the ward itself, and more and more responsibility for preliminary training which leads later to industrial activity has been placed on the nursing personnel. The occupational therapist steps in when the preliminary ward training has been completed.

The family care program of the hospital has been increased during the year. After a considerable experience with a large number of patients in boarding homes, I am more impressed than ever by the possibilities of a continuation of this particular method of handling individual patients. These patients naturally fall into two distinct groups. In the one case boarding homes are utilized as a transitional step between the rigid discipline of the hospital and the comparative freedom of the patient's own home. It is a trial period and enables the psychiatrist to estimate just what the patient is able to accomplish under the stress and strain of community conditions. On the other hand, there are a group of custodial patients who are much better off in the environment of a home, and can get along perfectly well. The first group is, in our opinion, the most important one, and the increasing use of boarding out or family care as a social case work tool will come in the near future. This is one of the means by which the overcrowded condition of mental hospitals can be relieved without the tremendous investment in capital construction.

The centralization of the nursing service has been continued, and it is our opinion that such centralization has been productive of a considerable degree of efficiency. There can be no justification for different standards of nursing service in the same hospital. In order to prevent such a condition it is necessary that all nursing be concentrated under one head. The old problem of nursing is a very important matter. It seems to be obvious that if we wish to have hospitals, the nursing service must be under the control of properly trained graduate nurses, and it is my recommendation that every effort be made to increase the number of graduate nurses working in the field of psychiatry. Hospital psychiatry should be a recognized specialty of the nursing profession, and I am convinced that the members of the profession would be attracted to it if a proper recommendation of their service could be given.

Research has, as in the past, occupied an important position in our program. There are so many questions to be answered in psychiatry and in the administration of the mental hospital, that it seems imperative that a concentrated systematic effort be made to find the answers to some of the confusing and perplexing questions that are constantly arising. A concentration of effort on this particular point will bring forth rich results. It is a short sighted policy to continue to house and care for mental patients without making a determined effort to get at the cause of the condition, and take steps to find some way of either preventing or combating the mental disorder. An indispensable part of a research service is a medical library. During the year our library has been extended and the quarters increased in size. The library now consists of approximately eight thousand volumes. It has been the policy to build this library around the current periodicals and at the present time the hospital subscribes to a large number of psychiatric journals. We have also improved the patients' library. It has been moved into new quarters and many new books have been added.

The details of the work of the laboratory will be found in the report of the Director, Dr. J. M. Looney. One of the most important contributions the labor-



atory is making to the hospital itself is the clinical pathological conferences. These have continued at monthly intervals. A journal club and a medical history club have also functioned as in previous years.

Attention is called to the report of the head farmer, which discusses the question of the planting chart and the freezing process for vegetable conservation.

The report of the Child Guidance Clinic shows that a considerable amount of preventive work has been done during the year. It is our opinion that prevention and research will do more towards cutting down mental disorder than anything else.

#### PSYCHIATRIC SERVICE

*Morris Yorshis, M.D., Clinical Director*

During the past twelve months a special effort was made to determine what the factors were that helped patients leave the hospital. In the frank organic psychoses, particularly in the early psychoses due to syphilis, treatment of the underlying somatic pathological condition was of significant value as one would expect. When one considers the amount of individual attention which physicians in state hospitals can give to patients we are forced to the conclusion that the healing power of nature must play a significant role. While we find it extremely difficult to evaluate the actual curative value of our efforts it is much less difficult to evaluate palliative measures. Patients suffering from psychoses with cerebral arteriosclerosis and senile dementia who are completely unmanageable in their homes, disrupting entirely the morale of the household, by means of habit training firmly yet kindly applied, become changed individuals in many cases in a comparatively short space of time.

Only about sixty percent of the new admissions leave within the first year but, it must be remembered that 25 or 30% of the admissions are cases of Senile Dementia and Arteriosclerosis and the recovery rate from this group is very insignificant. The paretics that are committed in many instances have had extended courses of treatment, and commitment was necessary apparently because no improvement resulted. With such patients it is quite impossible to bring about complete recovery although the condition may be arrested. Detailed study of the psychiatric aspects of the paretics have shown that not only is the early recognition of the disease important in the prognosis, but that a well integrated prepsychotic personality seems to have a determining influence.

The survey of the data has led us to conclude that the personality assets and liabilities, the physical status, and the social situation are the three important facts to study in every patient. It seems that what this hospital offers in application of this appraisal is the effective forcing of patients to live in certain patterns. These patterns are varied, certainly, and only loose adherence is required of the patients which implies tolerance, sympathy with and understanding of the individual. The understanding is not a conscious psychological one. It is rather a knowledge, secured empirically, of what a given patient likes and dislikes, of what he can do or will try to do in work, organized play or casual contacts. The hospital situation, if carefully controlled, can bring about improvement in the patients' condition in a rather short time. In that it is impossible to do any comprehensive psychotherapy or at least psychotherapy that can be given regularly by the physician, it is incumbent upon the medical staff to devise some means to arrange for a suitable environment that will tend to ameliorate the mental illness so that repair can go on unhampered. Just what this should constitute has been a matter of debate. The program here for the past year has been very carefully organized, and varies with the individual patient, but as a group most of them are on the following program:

Every patient must have the general care that is given to the patient in a general hospital, attention to the skin, teeth and physical needs. Forcing patients to brush their teeth or to bathe may in many respects create difficulties, especially if the milieu from which they come makes no such demands. It is here that the physician has to individualize. The same thought must necessarily be given to cases that are assigned work. Many patients react very satisfactorily to the work situation but respond poorly to the other patients at work at the same job; with careful selection of groups of patients and the type of foreman supervising the pa-

tients, irritations can be avoided. The occupational therapy department has done remarkably fine work in lessening the tensions that have heretofore been very prevalent in the various industrial situations prescribed for patients. The inertia that existed on many wards, especially after working hours, has been in most instances done away with due to the extensive recreational activities that have been prescribed for all wards. Special radio broadcasts with games, dances, and other entertainments have continued to increase group interest, and have a definite psychotherapeutic value, especially where the ward personnel through lack of time has been unable to give each individual patient the stimulation that he needs.

While medical treatment is given, especially hydrotherapy treatments, it is difficult to say that the tub or the pack or the tonic bath has led to recovery, and the same can be said about sedative drugs. Experience has not shown that the drug is responsible for the cure, but it does definitely lessen tensions and in many cases if this can be done with hydrotherapy or with manipulation of the hospital environment it certainly is preferable to do the latter than to resort to the use of sedatives. It would seem, therefore, that by lessening the irritations of a mental hospital through a carefully arranged industrial and recreational program, many patients can be helped.

Careful study by the Social Service Department of the resources in the community and supervision of the environmental stress in a given situation may lead to permanent adjustment without necessary recurrence of the disorder. This has been found to work very satisfactorily in the past. We plan to continue this survey in the hope that we may conclusively determine the most important therapeutic factors in the hospital situation. We have found that keeping relatives away from certain disturbed patients, especially of the manic type, has been a considerable help to these patients. We have also found that many of these patients do very badly when visited or treated by members of the opposite sex. Particular points of this nature are being revealed as detailed studies of individual patients who have resided in the hospital for a year have been made.

This survey has demonstrated that text-book criteria for prognosis are by no means sound, and that only after thorough study of large groups of new admissions will we be able to make prognoses in individual cases with a high degree of reliability. Succinctly, individual psychotherapy in the major psychoses, while it may be important, with the present ratio of physicians to patients, certainly cannot be given at the State Hospital to any appreciable number of patients. Something else, therefore, must be done to obviate this deficiency. We believe that a carefully worked out therapeutic program which includes general care, occupational and recreational activities plus medical treatment will tend to lessen tensions in the various situations which patients will encounter and will be the major means by which patients will leave the hospital sufficiently well to adjust to the community.

#### NURSING DEPARTMENT

*Katherine M. Steele, R.N., Superintendent of Nurses*

The work of the nursing department for the current year has been concentrated in an attempt to develop, improve, and stabilize programs that were instigated in 1935. In January, 1936, a vacation schedule was put into effect distributing vacations evenly throughout the entire year as near the date of employment as possible. With this even distribution of vacations the shortage is at least a constant factor though the need for an additional quota of twenty employees for relief, for vacation and illness is very great.

Since June, 1936, it has become increasingly difficult to find graduate nurses for floor duty. The condition exists throughout the country and in all branches of nursing. Whereas, last year at this time, we had 121 graduate nurses on the staff, we now have 103.

The centralization of the administration of the nursing service at the Summer Street Department became effective this year; this has been accompanied by an increase in the number of female graduate nurses on the male service as head nurses and supervisors. Mrs. Myrtle Fuller, as Superintendent of Nurses, Summer Street Department, has increased her supervision to include the male service. The results obtained in the co-ordination of the nursing service of the entire institution



have been gratifying, though certain problems arise because no part of the nursing service is now an independent unit. Quotas of the ratio of nursing personnel to patients have had to be decided upon for each service and redistributions made.

With the additional personnel necessary for the forty-eight hour week, there was an increase in the staff of barbers from two to four. New equipment and extra facilities have been furnished so that where last year male patients had one or two shaves a week, they now have three shaves every week. Haircuts have been increased to one in every three weeks. An electric razor was purchased for the male medical wards so bed patients can now have shaves more often.

The four students from the Training School, who took their senior year affiliation at Springfield, completed their training in the fall of 1936. They will return to this hospital to be prepared for the Commissioner's examinations.

Affiliations have continued with the Hahnemann, Memorial and St. Vincent's Hospitals of Worcester. A total of twenty-eight students from these hospitals have completed a three months affiliation. A course of thirty hours in Psychiatry and Psychiatric Nursing was given to a group of sixty student nurses from these same hospitals in January and February, 1936. The orientation course for all new employees has been given at intervals throughout the year by members of the administrative staff.

Miss Margaret Diamond has continued to instruct all new attendants in a thirty hour course in practical nursing and the routine of the hospital. All student nursing groups and all new attendants have had instruction in hydrotherapy.

Two students were graduated from the post graduate course in May, 1936. One has been retained on the staff of this hospital as a head nurse. The other accepted a staff position at the Payne Whitney Clinic in New York City. Five students are enrolled for the present post-graduate course.

#### OCCUPATIONAL THERAPY DEPARTMENT

*Dorothea Cooke, O. T., Reg., Chief Occupational Therapist*

During the past year this department has continued the program as outlined in the re-organization of the previous year, developing and branching out, always with the aim of enlarging our scope and perfecting a set-up which will include practically the entire patient population. Due to the formation of a continued treatment service, which necessitated an additional industrial office, we have transferred one of the Summer Street assistants to the main hospital for the time being. This leaves one assistant in the Summer Street Department to carry on the routine work there. Other than this change our department personnel remains the same. Sixteen students from the Boston School of Occupational Therapy have completed their field work in mental hospital occupational therapy training.

Our two shops, one for the Male Service, and one for the Female Service are primarily orientation and evaluation centers, where the newly admitted patients are sent as soon as possible after admission. The activities in the shop are of necessity of handicraft nature.

We have kept them as practical as possible and confined the work to hospital needs. Baby clothes, surgical dressings, bookbinding and repairing, mending, knitted jackets, table runners, and pillows for the wards and simple laundry have been included. Patients have been prescribed to the shop for two weeks' observation periods. During that time the therapist has made complete notes of the education, vocational and avocational interests, or lack of them, their capabilities and aptitudes for each patient. These findings have been presented to the physician and take their place with reports on the patients' condition and progress that go to the physician from other departments, thus enabling him to plan a re-educational and rehabilitative program for each patient.

The main stress in the department has been Industrial Therapy. This is the therapeutic use of hospital industries for the benefit of the patient, through work activities. It does not indicate just any work in contrast to idleness, but work intelligently prescribed by the physician for its physical demands, its emotional effects, its social influence, its mental stimulus, and its integrating power in relation to the individual patient. Craft work is primarily an individual occupation and for the normal person it often becomes a hobby in which is found surcease from conflicts and responsibilities of every day life. Through placing patients in normal



hospital tasks we have endeavored to return these factors of normal activity that have been lost; namely, productivity, social, and community interests and responsibilities.

An analysis of each particular task in the hospital has been made, using the following form as guide:

- Name of job
- Attitude of department head
- Attitude of division head
- Attitude of industrial therapist
- Description of work
- Environment
- Supervision
- Industrial hazards
- Requirements of the job:
  - a. physical
  - b. psychological
  - c. social
- Hours of work
- Socializing factors.

In making this analysis, we obtained detailed information regarding personality characteristics, physical status, special training, and intelligence required for a patient to fill capably the needs of each task.

One of the facts we have discovered is that keeping a patient too long on one job is not effective therapy; thus the grading of jobs with a plan of promotion has been important in our program. Charts with jobs graded as to behavior and intelligence requirements have been our latest steps in attempting to achieve scientifically supervised occupation.

Nurses ward classes started last year have greatly improved. By means of informal guidance at regular intervals the nurses have gained a broader understanding of possible projects, materials, design, color and practical application, resulting in an increased effectiveness in their stimulation and guidance of the patients work interest. The quality and output has improved, whereas last year burlap raveling was predominate, this year patient's mending has been the chief activity.

Ward games and recreation have continued to be the nurses responsibility, the occupational therapist acting indirectly as a source of equipment and advice. A program for outdoor recreational activity was instituted this summer, consisting of tennis, croquet, volley ball, shuffle board, and ring toss. Several base-ball teams were organized among the male patients using a special type of soft play-ground base-ball. Plans were drawn up and the foundation laid for an outdoor dancing floor for use during the summer holidays.

Community recreational activities have been dances, movies, W.P.A. plays, community sings, and during the summer months band concerts.

#### SOCIAL SERVICE DEPARTMENT

*Barbara Estes, M.A., Chief Social Worker*

During the past year there have been several changes in personnel in the Social Service Department. Miss Helen Crockett, head worker, resigned in November, 1935 to accept another position. In the absence of a civil service list a provisional appointment was made in January 1936, becoming permanent in November. Miss Anne Hecht, social worker on the male service, left on September 31, 1936 to be replaced by Miss Helen Hollander on October 14. The hospital was granted a special worker for a period of three months for an intensive study of Family Care. Mrs. Addienne Wise, who had been connected with the hospital for some time as a volunteer worker was appointed for this study on September 21. We are hoping that this appointment will be made permanent so that we may have two full time workers for this branch of the service.

We have had eleven student social workers and one volunteer worker during the year. From September 1935 to June 1936 we had three students from the Smith College and one from Simmons College School of Social Work. During the summer we had the services part time of one young woman taking the summer

course for theological students and one volunteer worker. The latter had had training at the New York School of Social Work, and both were of great service to us during the summer months when the staff was cut by vacations. Fall again brought us students from Smith and Simmons, three from each school. One of the latter group left after a few weeks, however, leaving us five for the winter months. Despite their lack of training in hospital work, they have adjusted well, and carry a fair share of the work.

Statistics for the year are as follows: 1,453 new cases were referred to the department including 434 histories and 495 requests for special investigations. Interviews held with patients, relatives, friends, etc., totaled 5,027 including 1,060 interviews on, and in regard to, Family Care patients. Of the 200 patients in Family Care during the year, 99 were new placements. Thirty-six patients were transferred from Family Care to Visit during the year.

The department has sought to strengthen the spirit of cooperation between it and the other hospital departments, attempting to give the type of service most needed by the staff. Intensive cases have been referred in staff meetings and the type of treatment determined by psychiatric and social service. Such treatment has then been carried on in close consultation with the psychiatrist on the case. This has, we believe, developed a keener appreciation in both service of the special abilities and limitations of each. Through such cooperative efforts, with all services working together for the patient's best interests, the highest type of therapy can be carried out.

The department has continued its part in the training program of the hospital. This includes not only the intensive work with the social service students, but also lectures to nurses, summer theological students, and monthly lectures to each new group of medical students. We have had many visitors from other state hospitals who were particularly interested in this phase of the work. In addition there have been others particularly interested in the aims of Family Care. We appreciate their interest, and are always glad of the new ideas, suggestions and helpful criticism which they bring us.

#### RADIO DEPARTMENT *Wallace F. Searle, Director*

For the purpose of clarity this report will be divided into three parts. The first will deal with the statistical details of the department, the second will explain individual therapy as administered to patients working in the department, miscellaneous activities will be compiled in the third part.

#### *Statistics*

There were 1,931 programs broadcast from studios of WSH. These include news bulletins, turntables, Dramas, Doctor's calls, talks by physicians and staff members, piano, organ, vocal and violin programs by patients, and programs by employees.

Four hundred twenty-eight turntables were broadcast to wards. These turntables consist of electrical recordings which we are able to use when we are unable to procure what we wish from the outside.

Eight hundred ninety-three doctor's calls were made in the staff dining room. By retaining a loudspeaker in the staff dining room we are enabled to call physicians during meal time and greatly accelerate phone service during those periods.

Eight hundred sixty-four news bulletins were broadcast from our own station either by the radio director or patients assigned to the radio department. By a careful statistical study of outside local news bulletins we discovered that over 50 per cent of the news was of an undesirable sort for patients. By carefully censoring the news we are able to give news which we believe to be beneficial to the patient population. Two general news bulletins are presented by patients and a feature entitled, "Notables in the News" by the director each day.

Ninety-four WPA Band and Orchestra concerts have been broadcast to the wards. The advertising continuity we interpolate between musical numbers deals with mental hygiene and hospital information.

Three-hundred sixty-six daily WSH Radio Programs were typed and lined. Each day it is necessary to cull from the various advance programs of net work



stations what is best to re-broadcast as well as to include the daily or special programs from our own station. This means tabulating each feature for every fifteen minutes during the entire day and to draw lines to the respective wards that each particular feature should be broadcast to.

#### OCCUPATIONAL THERAPY AND SPECIAL POSITIONS

In our department of Occupational Therapy there has been inaugurated a system of graded positions for patients with positions ranging from D to A. Up and beyond even the A positions are a few outstanding hospital positions that are classified as "special positions". The radio department is included in these special positions. When a patient needs to have a position that requires much initiative, keen concentration, and a bolstering of his self esteem he is assigned either to clerical work in the radio department or to work on the radio control board. During the past year among the many patients assigned to this work have been a world war veteran, a postman, a first class machinist, a prominent lawyer, a registered nurse, a research chemist, an insurance agent with an all high record for insurance sales in the Commonwealth, a brick-mason, a concert violinist, a house wife and four high school boys. Usually the type of patients assigned to this department are convalescent. This entails constant teaching of departmental activities as well as radio techniques. In many instances patients have been taught radio techniques by other patients. A two fold bit of therapy is accomplished thereby for the teacher senses a feeling of superiority, and the pupil entertains respect for his fellow patient and enters with a sprit of competition so as to try and eventually operate better than his teacher.

#### MISCELLANEOUS ACTIVITIES

Weekly choir rehearsals with patients convene for preparation for the Sunday services.

A vested choir of employees and patients sing under the direction of the musical director for all Catholic and Protestant services.

Many lectures relative to music in institutions have been delivered to community groups. These are all in response to requests from the outside and are an infinitesimal aide in bringing community interest to the institution.

All dramatic and musical WPA units have been supervised by this department. Three WPA dramatic performances are staged weekly for our patient population by a residing WPA unit. These plays are presented both at the main hospital and at the Summer Street Department.

A questionnaire relative to radio in mental institutions has been circulated to all mental hospitals and sanatoriums in the United States and Canada. We are vitally interested to find out to what extent a radio system in a mental hospital can be used therapeutically. Because of this, we are anxious to discover what other institutions have done along this line and to profit by their experiences and findings.

A racial index of the patient population has been compiled. This will aid us in preparing racial programs.

A radio drama in serial form and especially designed for therapeutic ends was written by a member of the WPA unit under the supervision of the department. These radio plays depicted the onset of a neurosis in a young boy while living at home. Through dramatic scenes he was taken through the hospital routine until he convalesced and returned home mentally healthy. The proof that patients listened to and benefited by these plays were the scores of letters they sent in to the superintendent.

#### MEDICAL AND SURGICAL SERVICE

*W. Everett Glass, M.D., Director*

The following report summarizes briefly the activities of the medical and surgical service from October 1, 1935 to September 30, 1936.

##### (1) *Movement of population on the service:*

There were 955 cases admitted to the service during the past year which is an increase of 36 cases over the figures given last year. The largest number of cases were admitted during the months of April, May, June and August, about the same seasonal variation as last year. Of these cases 184 were admitted for study only,



an increase of 40 over the previous year. Four hundred and twenty-eight male and 339 female cases were discharged in this same period. The monthly turnover averaged 64 and is an increase from 59, the figure last year. Discharges from the service detailed as to physical condition are shown in the following tables: —

Table I

	Female	Male	Total
Recovered and improved . . . . .	368	304	672
Not improved . . . . .	17	18	35
Not treated . . . . .	27	17	44
Total . . . . .	412	339	751

(2) *Deaths:*

During the fiscal year 204 patients died as compared with 257 the preceding 12 months. The following table gives the details of the deaths and autopsies: —

Table II

	Female	Male	Total
Total number of deaths . . . . .	108	96	204
Total number of autopsies . . . . .			124
Total number of medico-legal cases . . . . .			21
Autopsies confirmed ante-mortem diagnoses (70% or more)			101
Autopsies confirmed partially, ante-mortem diagnoses (50 to 70%) . . . . .			17
Autopsies refuted ante-mortem diagnoses (less than 50%) . . . . .			6
Autopsy percentage of deaths — 60.7%			

During the year 24 patients died at the Summer Street Department.

The autopsy percentage is 60.7%, a decrease of 2.3% from last year. A total of 124 autopsies were done as compared with 163 in this same period.

A survey of the deaths reveals that as usual, pneumonia caused the largest number of deaths — 68, or 33%. The number of deaths in this group is exactly the same as last year although the percent is greater. There were only four cases of lobar pneumonia the past year. The average age in this group is 68.2 years, a slight decrease from last year.

Thirty-two persons died as a result of changes of a senile nature. This is 15.6% of the total deaths. The average age in this group was 71.7. The most of these were classified as cardiovascular renal disease and generalized arteriosclerosis.

Twenty-one or 10.7%, died from general paresis. The average age of this group is 46.4. This represents a decrease both in the total number and in the percentage. The average age of the group is increased by almost 9 years, when compared with this group last year.

Seventeen or 8.3% died from pulmonary tuberculosis. The average age was 54.7. The age in this group continues to rise. It was 48.5 in 1934, 51.4 in 1935, and now 54.7 this year. We believe that the pneumo-thorax treatments given these patients have caused the increase in the ages of this group.

Cancer was the cause of death in 8 cases or 3.9%. This is a decrease over the figures of last year.

Cerebral hemorrhage caused the death of 10 persons, pulmonary thrombosis 4, primary kidney disease 5, primary heart disease 9, diabetes, intestinal obstruction, and C.N.S. syphilis accounted for three each.

Six or 2.9% died directly as a result of fractures.

Fifteen or 7.3% died of miscellaneous causes. The average in this group was 45.3 years.

(3) *Consultations:*

The following table represents the extent to which the consultant staff was used during the year.

Table III

Eye . . . . .	110
Ear, nose and throat . . . . .	17
Gynecological and obstetrical . . . . .	57

General surgical . . . . .	93
Medical . . . . .	12
Orthopedic . . . . .	0
X-Ray . . . . .	1,573
Others . . . . .	42
Total . . . . .	1,904

There is no significant change in this part of the medical service. There was a decrease of about four hundred cases seen by our X-ray consultant. This is approximately the amount of last year's increase, and probably is a return to normal.

(4) *Obstetrics:*

There was a slight increase in the activity in this department the past year. A total of 12 babies were born during the year, as compared with 9 the preceding year. It is still our feeling that some legal means should be found to enable us to place the children who are born here without waiting for the whims and fancies of persons responsible for the placement of these children. During the past year at least two children had to remain in this hospital until they were almost able to walk.

(5) *Surgery Detailed:*

Table IV. *Operations Performed*

Amputations major . . . . .	1	Hemorrhoids . . . . .	3
Amputations minor . . . . .	2	Herniorrhaphies . . . . .	6
Appendectomies . . . . .	6	Hysterectomies . . . . .	5
Bimanual exams. (anaes.) . . . . .	1	Incision and drainage . . . . .	122
Biopsies . . . . .	7	Injections of varicosities . . . . .	97
Blood transfusions . . . . .	6	Intestinal obstruction . . . . .	3
Bronchoscopies . . . . .	2	Ionizations of cervix . . . . .	8
Caesarian section . . . . .	1	Iridectomy . . . . .	1
Cataract removal . . . . .	1	Paracentesis . . . . .	1
Cervical repairs . . . . .	11	Perineal repairs . . . . .	12
Chest aspirations . . . . .	6	Plastic repairs . . . . .	4
Closed drainage . . . . .	3	Pneumothorax . . . . .	335
Cholecystectomy . . . . .	2	Prostatectomy . . . . .	1
Circumcision . . . . .	2	Pyelogram . . . . .	1
Colostomy . . . . .	1	Ramstadt operation . . . . .	1
Curettage of bone . . . . .	2	Removal of toe-finger nails . . . . .	6
Cystoscopic exams . . . . .	5	Rib resection . . . . .	1
Cystotomies (suprapubic) . . . . .	3	Proctoscopies . . . . .	5
Dilatation and curetage . . . . .	7	Saphenous veins ligation . . . . .	5
Dilatation of rectal sphincter . . . . .	1	Sigmoidoscopies . . . . .	3
Deliveries . . . . .	14	Skin tumors . . . . .	7
Dislocations . . . . .	4	Spinal manometrics . . . . .	35
Encephalograms . . . . .	13	Surgical diathermy . . . . .	1
Enterostomy . . . . .	1	Suspension of uterus . . . . .	1
Epididiotomy . . . . .	1	Suturing . . . . .	61
Exploratory laporotomy . . . . .	3	Teeth extraction (anaes.) . . . . .	25
Fistulectomy (vesico-vag.) . . . . .	1	Thoracotomy . . . . .	2
Foreign body removal . . . . .	8	Tonsillectomies . . . . .	8
Fractures, open reduction . . . . .	1	Vulvectomy . . . . .	1
Closed . . . . .	25		
Gastric lavage . . . . .	1	Total . . . . .	904
Gastrotomy . . . . .	1		

(6) *Clinics Detailed:*

Table V. — *Clinics Detailed*

Eye examinations . . . . .	849
Ear, nose and throat examinations . . . . .	770
Gynecological examinations . . . . .	517
Luetic treatments . . . . .	7,527

Small-pox vaccinations . . . . .	580
Lumbar punctures . . . . .	578
Typhoid and para-typhoid inoculations . . . . .	3,548
Hinton tests . . . . .	1,764
Others . . . . .	44

Total . . . . . 16,177

There were about 2,600 more treatments and examinations given this year. This represents a steady increase from year to year in this particular part of the medical service.

(7) *Dressings Detailed:*

*Table VI. — Dressings Detailed*

Abrasions and lacerations . . . . .	1,892
Boils and carbuncles . . . . .	575
Burns . . . . .	123
Infections . . . . .	13,063
Ulcerations . . . . .	517
Others . . . . .	3,090
Total "out-patient" dressings . . . . .	7,562
Total "ward" dressings . . . . .	27,208

Grand Total . . . . . 54,030

This is a decrease of about 1,200 in the total number of dressings done during the year.

(8) *Employees:*

During the year 3,370 examinations and treatments were given. This is an increase of 1,300 over last year. Forty-eight males and eighty-four females were hospitalized during the year. The total number of working days lost by hospitalization was 995, an increase of 167 days over the preceding year.

(9) *Dental Department:*

*Table VII. — Dental Report*

	Main Hospital	Summer St. Dept.	Total
Cleanings . . . . .	1,554	162	1,716
Examinations (routine) . . . . .	2,446	271	2,717
Extractions . . . . .	1,822	189	2,011
Fillings . . . . .	1,672	156	1,828
Impactions removed . . . . .	47	2	49
Miscellaneous treatments . . . . .	1,061	64	1,125
Plates . . . . .	52	4	56
Repairs . . . . .	99	16	115
X-Ray diagnoses . . . . .	71	—	71
General anesthetic cases . . . . .	28	—	28
Total examinations and treatments . . . . .	8,852	864	9,716
Total patients examined or treated . . . . .	4,249	420	4,669

(10) *X-Ray Department:*

*Table VIII. — X-Ray Department Analysis*

X-Ray plates used . . . . .	2,606
Patients examined . . . . .	1,494
Foot and finger prints (sets) . . . . .	41
Photographs . . . . .	222
Lantern Slides . . . . .	122

There was no significant change in the activity in this department. Additional equipment was obtained during the year which has improved the scope of fluoroscopic work that can be done.



(11) *Physical therapy Department.*Table IX. — *Physical Therapy Department*

Ultra-violet (air-cooled)	1,980
Ultra-violet (water-cooled)	421
Baking	1,833
Massage	1,453
Diathermy (medical)	620
Diathermy (surgical)	63
Muscle re-education	1,366
Others	118
Total treatments and tests	7,854
Total number of patients treated	4,978

There has been a decrease in the amount of work done in this department during the year, by about 800 treatments. A surgical knife was purchased during the year and this added equipment will enable our surgeons to do work which before they were unable to do.

## LABORATORY REPORT

*Joseph M. Looney, M.D., Director*

The total number of determinations for the past year decreased to 45,700 as shown in detail below. This decrease was predicted in last year's report and was occasioned by a change in the type of work carried on for the research service from a descriptive to a more experimental and exploratory nature. During the year there were 204 deaths and of these 124 were autopsied. The decrease in deaths noted last year was even more marked for this year, 55 less deaths being noted. The ratio of autopsies to deaths remained about the same, 61% as compared with 63% for the previous year. This percentage though very creditable could probably have been raised somewhat if we had been able to keep the position of pathological interne filled.

The work of training suitable college graduates as technicians in clinical pathology has been continued and one of the girls who completed her course last year has been able to secure employment. The laboratory was one of the four located in Massachusetts placed on the first list of accredited training schools for technicians approved by the American Medical Association.

The Clinico-pathological conferences have been held monthly as in previous years. The value of these conferences in the training of medical students and internes is readily apparent to those attending them.

During the year the following papers were published:

*Bone Marrow Studies in Glandular Fever (Infectious Mononucleosis).* Am. J. of Clinical Path. 6: 185, 1936. Wm. Freeman.

*The Blood Pressure Raising Principle of Adrenal Cortex Extracts,* J. Biol. Chem. 114: Lxii. 1936. J. M. Looney and M. A. Darnell, Jr.

The following papers are in the hands of the Publishers:

*The Oxygen and Carbon Dioxide Content of Arterial and Venous Blood of Normal Subjects.* J. M. Looney and E. M. Jellinek. To be published in The American Journal of Physiology.

*The Oxygen and Carbon Dioxide Content of the Arterial and Venous Blood of Schizophrenic Patients.* J. M. Looney and Harry Freeman.

*The Seasonal Variation of Cholesterol.* E. M. Jellinek and J. M. Looney.

The director presented a paper with Dr. Glass before the Worcester County Medical Society at the Hospital in February entitled: The Effect of Duodenal Extracts in Diabetes Mellitus. He also gave lectures before the student bodies of Holy Cross College, Worcester State Teachers College, and gave addresses before the Boston University Alumni Association, The Brown University Alumnae, the Worcester City Hospital Alumnae Association, and the Rotary Clubs of Marlboro and Walpole and the Shrewsbury Grange. He attended the annual meeting of the American Society of Biological Chemists in Washington March 23-27, where he gave the paper on adrenal cortex noted above. He also attended the Annual meeting of the Massachusetts Medical Society in Springfield in June and the scientific conference of the Harvard University Tercentenary in September.

Dr. Freeman presented a paper, Studies on Bacterial Flora of the Normal and Abnormal Mouth, in March to the Worcester District Dental Society. He gave a paper entitled: Studies on Adrenal Cortex Therapy in the Pernicious Vomiting during Pregnancy, to the Staff of the Boston Lying-in-Hospital on March 19. He gave talks on the Research Work of the Hospital to the Junior Auxiliary for the Home for the Jewish Aged of Worcester, to the Webster-Dudley-Southbridge Medical Club and to the Exchange Club of Worcester. During the year he attended the Annual Meeting of the American Association of Pathologists and Bacteriologists at Boston, on April 9-10, and the Connecticut Medical Congress, at New Haven, September 22-24.

The work of determining the chemical constituents of various regions of the brain has continued during the past year, and methods for handling the material have been perfected.

The investigations into the oxidative processes in schizophrenic patients have been continued and certain definite differences between them and normal subjects have been found out. This work is being continued by a further study on the utilization of sodium lactate when injected and by a study of the mechanisms involved through the use of the Warburg apparatus. In these experiments the changes in oxygen utilization which animal tissues undergo when blood and spinal fluid of normal and schizophrenic subjects are added to the system will be studied.

The work on the isolation of the blood pressure raising principle of the adrenal gland has been carried on by a grant from the Armour Co. A number of potent fractions have been prepared but as yet efforts to purify and isolate the substance responsible has been unsuccessful. The work will be continued for the coming year.

TOTAL NUMBER OF LABORATORY TESTS FOR FISCAL YEAR ENDING  
SEPTEMBER 30, 1936

Bacterial cultures . . . . .	206	Urine (urob.) . . . . .	130
Bacterial smears . . . . .	1,038	Urine (chlor.) . . . . .	164
Basal metabolisms . . . . .	1,102	Urine (blood) . . . . .	9
Blood cultures . . . . .	89	Blood typing . . . . .	56
Blood creatinine . . . . .	1,075	Blood calcium . . . . .	111
Blood N.P.N. . . . .	2,089	Blood chloride . . . . .	129
Blood sugar . . . . .	2,813	Blood cholesterol . . . . .	241
Blood urea . . . . .	1,020	Blood hematocrits . . . . .	158
Blood uric acid . . . . .	1,117	Blood sedimentation . . . . .	127
Blood counts (red) . . . . .	2,667	Blood gases . . . . .	111
Blood counts (white) . . . . .	3,376	Blood Ph . . . . .	101
Blood counts (diff.) . . . . .	3,270	Blood glutathione . . . . .	117
Haemoglobins . . . . .	3,279	Blood lactic acid . . . . .	522
Clotting times . . . . .	70	Blood phosphatase . . . . .	3
Bleeding times . . . . .	66	Blood phosphorus . . . . .	54
Icteric index . . . . .	88	Blood capacity . . . . .	608
Van den Bergh Test . . . . .	69	Blood widals . . . . .	3
Spinal fluid (cells) . . . . .	589	Nitrogen partitions . . . . .	2,584
Spinal fluid (gold) . . . . .	580	Plasmodia malaria . . . . .	3
Spinal fluid (Chlor.) . . . . .	565	Platelet count . . . . .	8
Spinal fluid (glob.) . . . . .	578	Reticulocyte counts . . . . .	73
Spinal fluid (sugar) . . . . .	578	Schillingrams . . . . .	363
Spinal fluid (prot.) . . . . .	572	Blood fragility . . . . .	15
Spinal fluid (diff.) . . . . .	7	Ascetic fluid . . . . .	168
Sputa . . . . .	879	Colonic irrigations . . . . .	24
Stools . . . . .	448	Animal inoculations . . . . .	9
Tissue sections . . . . .	1,290	Ascheim-Zondek tests . . . . .	22
Urines . . . . .	8,281	Stomach contents . . . . .	265
Mosenthal test . . . . .	78	Autogenous vaccines . . . . .	4
P.S.P. . . . .	22	Glucose tolerance . . . . .	33
Urine (quant. sugar) . . . . .	457	Galactose tolerance . . . . .	25
Urine (bact.) . . . . .	10	Toxicological exam. . . . .	2
Urine (bile) . . . . .	133	Urine (diacetic acid) . . . . .	1

Blood serum protein . . . . .	35	Spinal fluid (bromide) . . . . .	4
Milk analysis . . . . .	6	Blood creatine . . . . .	5
Milk blood plated . . . . .	6	Blood vitamin "C" . . . . .	261
Liver function test . . . . .	1	Urine vitamin "C" . . . . .	2
Blood amino acid . . . . .	10	Takata-Ara test . . . . .	3
Blood albumin . . . . .	26	Urine (qualitative sug.) . . . . .	25
Blood bromide . . . . .	14	Blood iodine . . . . .	3
Phytotoxic index . . . . .	36	Skin test (undulant fever) . . . . .	1
Congo red test . . . . .	1	Urine protein . . . . .	2
Blood potassium . . . . .	84	Urine (cell count) . . . . .	2
Peroxidase stains . . . . .	1	Blood volumes . . . . .	6
Blood sodium . . . . .	70	Blood lipoids . . . . .	28
Urine sodium . . . . .	140	Blood cholesterol esters . . . . .	28
Urine potassium . . . . .	150	Blood minute volumes . . . . .	5
Grand total (minus autopsies) . . . . .			45,700
Autopsies . . . . .			126

## RESEARCH DEPARTMENT

*F. H. Sleeper, M.D., Assistant Superintendent*

During the past year we have continued our investigations of the disordered homeostasis present in schizophrenic patients. We have utilized to advantage our regulated temperature and humidity laboratory for this purpose. Early in the experiments it was discovered that control observations on normal individuals as revealed by the literature were either lacking or inadequate. Inasmuch as Dr. H. Freeman wished to investigate temperature control in schizophrenics, we found it necessary to obtain our own control data for normal individuals on skin temperature, oxygen consumption rate, body temperature, oral and rectal, and the rate of excretion of insensible perspiration.

The difference in skin temperature between the right and left sides in nine symmetrically located areas were studied in twenty normal and twenty schizophrenic individuals at half-hour intervals for three and one-half hours, with environmental conditions at 24° C. and twenty per cent relative humidity. The schizophrenic patients showed less than normal ability to maintain bilateral symmetry of temperature but the two sides of the body are sufficiently similar to obviate the necessity of measuring both sides in future studies.

Twenty normal subjects and twenty schizophrenic patients were studied, nude, in the basal state at a room temperature of 24° C. and humidity at twenty per cent for three and one-half hours. Skin temperatures were taken seven times during this period at nineteen skin points. It was found that the adaptation of the skin and body temperatures to this cool condition of the schizophrenic patients differs from the normal, in certain levels of skin temperature, the extremities cool more rapidly, the temperatures of certain parts of the body decrease by a less consistent pattern, skin temperatures are more affected by changes in air velocity. These differences afford further evidence of defective adaptation in the schizophrenic subject. Similar studies were carried out at a warm temperature (32° C.). It was found that the schizophrenic in his adaptation to heat is as abnormal as in his adaptation to cold.

Studies have been made of the oxygen consumption rate and rate of excretion of insensible perspiration at 30° C. and twenty per cent relative humidity, with simultaneous studies of skin and body temperatures. It is now possible to determine the effect of basality as well as of environmental conditions on these various characteristics. These studies, as well as investigations on the effect of humidity, of cold, of heat, and of thyroidization on the variables mentioned above, have not been sufficiently analysed to make final conclusions, but we believe the results will prove highly meaningful.

During the last year schizophrenic patients and paired normal control subjects had their blood lactate determinations made after running up and down stairs, and the lactic acid, oxygen and carbon dioxide, and hydrogen-ion concentration of the blood determined before exercise. It was found that for a given amount of work, the patients accumulated a greater amount of lactic acid than do the controls.



Furthermore, patients required a longer period of rest than did the normals for the lactate to reach a normal level. This discrepancy is regarded as a fundamentally important datum.

The oxidation problem has been further studied by determining the oxygen and carbon dioxide content of venous and arterial blood of patients and normal subjects under comparable conditions of basality. Previous studies had shown that the volume of blood in the schizophrenic is somewhat less than normal, and that when the patient is in a basal state the passage of blood through the tissues is abnormally slow. Without going into details, we may say that under basal conditions in normal subjects the use of oxygen was determined entirely by metabolic factors in the tissues. In schizophrenic patients, however, we found that the more oxygen that was supplied, the more was used, and vice versa. The abnormal relationship between the blood gases was submerged during exercise, but the relative rigidity of the carbon dioxide itself was maintained. The schizophrenic in this regard reacts more like a physical-chemical mechanism than like a finely controlled organism.

Dr. Looney has continued his investigations on the glutathione content of the blood in normal and schizophrenic subjects in relationship to the lactate content of the blood. Preliminary studies are under way by Dr. Nickerson with the ultimate object of determining the oxidative capacity of isolated bits of living tissue obtained at operation, and also blood serum and cerebrospinal fluid.

Dr. H. Freeman, in a regulated temperature humidity laboratory, is making an investigation of the specific dynamic action of the amino acid glycine. Studies directed toward the refractoriness to oxidative stimulation in schizophrenic subjects have been made and will be discussed in the ensuing report.

For the past three years observations have been made upon the influence of a commercial glycerine extract of adrenal gland. We reported previously that in most schizophrenic subjects this material caused a rise in blood pressure. Hoskins and Freeman have shown that the weight of the normal subject is not significantly influenced by such extract in standard dosage, but that of the schizophrenic is definitely increased. The systematic differences brought out by these studies between the schizophrenic and normal individuals are a challenge. The material we have used has a tendency to correct the depressed circulation and to improve the nutrition of the patients. An understanding of the mechanisms of these effects might aid significantly in a better understanding of the physiology of the psychotic. Dr. Looney for the past year has been attempting to isolate the active pressor principle in this material. Several active preparations have been obtained, but it has not yet been possible to get them consistently.

Two studies of the influence of thyroid medication are being made. The first of these investigations of the thyroid hormone as a factor in psychodynamics was started two years ago. Several patients have now been studied at length, and the results will soon be published. During the past year eight deteriorated patients were placed on prolonged heavy dosage of desiccated thyroid substance by Dr. Cohen and Dr. Hoskins. Careful psychiatric observations were made and a large volume of data accumulated. It has been discovered that the chronic deteriorated type of schizophrenia is characterized by a remarkably high tolerance to thyroid substance, as measured either by physiological or by psychiatric changes. It is apparent that the high tolerance is not due to defective absorption but possibly is due to low reactivity of the body tissues, as thyroxin by vein must be administered in large doses to get any significant physiological response. The possibility of a humoral thyroid antagonist is being investigated as an explanation of the phenomenon. In connection with other thyroid studies Drs. Hoagland and Rubin of Clark University are investigating the effects of thyroid substance on encephalograms. We have at our disposal ample supplies of the maturity principle of the anterior pituitary gland and a polyvalent extract presumably containing most or all of the anterior pituitary principles. We are making moderately intensive investigations of the effect of this material on schizophrenic subjects.

Last March Dr. D. Ewen Cameron started the treatment of schizophrenic patients with large doses of insulin. To our knowledge, this is the first time that this treatment was used in the United States. Preliminary results are definitely

promising, and we are giving increased attention to it. We are not satisfied with the explanation of its action, and are making intensive studies directed toward a more satisfactory evaluation of the effect of this treatment. Dr. Hoagland and Dr. Rubin have been investigating the Berger rhythm in these patients also.

In the Annual Report for last year Mr. Shakow, the Chief Psychologist, outlined an integrated program designed to test the functional capacity of schizophrenics throughout the gamut ranging from the simple knee jerk at one end to complex mental and behavioristic activities at the other. This program has been continued. During the current year researches have been completed which deal with the effect of varying the warning interval on reaction time. It was shown that whereas the normal subject can get "set" for a given activity and hold the "set" for a considerable period in spite of distracting circumstances, the schizophrenic has notably less capacity. A study was also made of the comparative ability of schizophrenic and normal subjects to adapt to disturbing situations. In this connection the so-called psychogalvanic reaction was used as an index, noises as the disturbing factor. Adaptation in the patients was shown to be much impeded. Schizophrenic and normal subjects were also compared in their reactivity to disagreeable skin stimulation, using cardi tachometer readings as an index.

The Biometrics department has prepared analyses and interpretive memoranda for various members of the research group. The major analyses include those of blood gas data, variations of circulation time, reactions to disagreeable stimuli, bilateral symmetry of skin temperatures, effects of environmental variables upon skin temperatures, reaction to adrenal cortex medication, topographical distribution of skin temperatures, effects of hyperthyroidization on physiological and metabolic functions, analysis of imagery of schizophrenic patients, and analyses of reactions to the Rorschach test. Many minor tabulations and analyses were completed. Original researches included a variety of biometric analyses and a considerable amount of technical theoretical work as applied to the schizophrenic problem.

By the use of special techniques it is now definitely established that the schizophrenic subject as compared with the normal individual shows excessive variation in the following features: all nitrogenous constituents of the blood and urine, blood cholesterol, lactate, potassium, potassium-calcium ratio, sugar, blood pressure and circulation time, skin temperature, and body weight. On the other hand, blood calcium and the carbon dioxide of the blood are found to be held within abnormally rigid limits. Presumably these findings indicate adaptational difficulties.

During the past year Dr. A. Angyal has been interested particularly in empirical syndromization, and he has been able to isolate a certain syndrome which occurs in approximately 12 per cent of the schizophrenic population studied. The patients all showed a variety of somatic complaints which included sensation of lightness or heaviness of the body, sensation of levitation, an impression of expansion or shrinking of the body, and of an airy substance passing through and emanating from the body. The normal person has, as a part of his conception of himself as an individual, a mental picture of his own body as a totality. This picture includes the posture of the various parts. Under the influence of the unnatural sensations mentioned above, the patient's perception of his "postural model" disintegrates. Dr. Angyal has been able to throw considerable light on the sensory-neurological basis of the somatic complaints.

During the last few months Dr. Angyal has been working on plans for a comprehensive integrating study of the data that have been and are being secured by the Research Service as a whole. He has made for several years a broad survey of the field of psychiatry, and has attempted to revise and clarify basic concepts and devise a method of synthesis which will allow the unification of physiological, psychological, and sociological data in a common scheme.

Another major project in the psychiatric department is Dr. Cohen's study of schizophrenic deterioration. From a psychological point of view, special attention has been given to the matter of imagery in a group of twenty-one patients and a comparable group of normal controls investigated under similar experimental conditions. The first step of the physiological approach to the problem of deteri-



oration was to study the effects of thyroid given in large doses to a selected group of patients. The deteriorated patient was characterized by low responsivity. Details will be reported shortly in the literature.

The following articles were published during the year on the Research Service:

1. *Psychopathic Personalities*. Eugen Kahn, Lloyd J. Thompson, and Louis H. Cohen. Practitioner's Library of Medicine and Surgery, Vol. IX: Chapt. III. pp. 57-104, D. Appleton-Century Co. 1936.
2. *Schizophrenia*. Eugen Kahn and Louis H. Cohen. Ibid. Chapt. XLVI. pp. 1145-1192, 1936.
3. *Psychological Government and the High Variability of Schizophrenic Patients*. J. McVicker Hunt, Ph.D. Am. Jour. Psych. 48: 64, January, 1936.
4. *An Endocrine Approach to Psychodynamics*. R. G. Hoskins. Psychoanalytic Quarterly. 5: 87, January, 1936.
5. *A Method of the Estimation of Average Heart Rates from Cardiochronographical Records*. E. Morton Jellinek and John W. Fertig. Jour. of Psych. 1: 193, February, 1936.
6. *Peripheral Venous Blood Pressure in Schizophrenic and in Normal Subjects*. Charles M. Krinsky and Jacques S. Gottlieb. Arch. Neur. & Psychiat. 35: 304, February, 1936.
7. *Is the Pressor Effect of Glycerin Extract of Adrenal Glands due to Epinephrine?* R. G. Hoskins and J. S. Gottlieb. Endocrinology, 20: 188, March, 1936.
8. *Physiological Factors in Personality*. R. G. Hoskins. Occupations, The Vocational Guidance Magazine. Sec. 1, May, 1936.
9. *The Blood Pressure-Raising Principle of Adrenal Cortex Extracts*. Joseph M. Looney and Matthew C. Darnell. Jour. Biol. Chem. Proc. Am. Soc. Biol. Chem. 114: 1xii, May, 1936.
10. *Endocrine Factors in Behavior*. R. G. Hoskins, Ph.D., M.D. Journal-Lancet, 56: 249, May, 1936.
11. *A Comparative Physiologic, Psychologic, and Psychiatric Study of Polyuric and Non-Polyuric Schizophrenic Patients*. Francis H. Sleeper, M.D. and E. M. Jellinek, M.Ed. Jour. Nerv. & Ment. Dis. 83: 557, May, 1936.
12. *The Experience of the Body-Self in Schizophrenia*. Andras Angyal, M.D., Ph.D. Arch. Neur. & Psychiat. 35: 1029, May, 1936.
13. *Relationship of the Systolic to the Diastolic Blood Pressure in Schizophrenia: The Effect of Environmental Temperature*. Jacques S. Gottlieb, M.D. Arch. Neur. & Psychiat. 35: 1256, June, 1936.
14. *Measurements of the Consistency of Fasting Oxygen Consumption Rates in Schizophrenic Patients and Normal Controls*. E. Morton Jellinek. Biometric Bulletin, 1: 15, June, 1936.
15. *The Use of Interaction in the Removal of Correlated Variation*. John W. Fertig. Biometric Bulletin, 1: 1, June, 1936.
16. *The Relationship of muscle tonus changes to vibratory sensibility*. Louis H. Cohen and Stanley B. Lindley (in "Psychological Studies of Human Variability in Honor of Professor Raymond Dodge, edited by Walter Miles). Psychol. Monog. 47: No. 212, 83, 1936.
17. *The way of experiencing as a psychiatric concept*. Eugen Kahn and Louis H. Cohen. Ibid. Psychol. Monog., 47: No. 212, 381, 1936.
18. *Phenomena resembling Lilliputian hallucinations in schizophrenia*. Andras Angyal. Arch. Neur. & Psychiat. 36: 34, July, 1936.
19. *Studies of Motor Function in Schizophrenia. I. Speed of Tapping*. David Shakow and Paul E. Huston. Jour. Gen. Psychol. 15: 63, July, 1936.
20. *Speech Perseveration and Astasia-Abasia following Carbon Monoxide Intoxication*. Louis H. Cohen, M.D. Jour. Neur. & Psychopath. 17: 41, July, 1936.
21. *Weight Changes Following the Use of Glycerin Extract of Adrenal Cortex*. R. G. Hoskins and H. Freeman. Endocrinology. 20: 565, July, 1936.
22. *Some Implicit Common Factors in Diverse Method of Psychotherapy*. Saul Rosenzweig. Am. Jour. Orthopsychiat. 6: 412, July, 1936.
23. *Pacemakers of Human Brain Waves in Normals and in General Paretics*. Hudson Hoagland. Am. Jour. Physiol. 116: 604, August, 1936.



24. *A Method Facilitating the Application of the "Chi Square" Test to Certain Problems Arising in Social Psychology.* Forrest E. Linder and Margaret V. Leary. Jour. Soc. Psycho. 7: 363, August, 1936.
25. *On a Method of Testing the Hypothesis that an Observed Sample of  $n$  Variables and of Size  $N$  has been Drawn from a Specified Population of the Same Number of Variables.* John W. Fertig. Annals of Mathematical Statistics. 7: 113, September, 1936.
26. *Psychogenic Factors in the Polyuria of Schizophrenia.* Wilbur R. Miller, M.D. Jour. Nerv. & Ment. Dis. 84: 418, October, 1936.

PSYCHOLOGY DEPARTMENT  
David Shakow, M.A., Director

A statistical analysis of the work done by the Department during the year reveals the following:

*Psychometric and Experimental Studies*

<i>House</i>	<i>Individuals Examined</i>	<i>Number of Tests Given</i>
House Patients . . . . .	321	1,308
Schizophrenia Research Patients . . . . .	147	210
<i>Out-Patients</i>		
School Clinic . . . . .	273	309
Adult Delinquents . . . . .	14	32
Other Patients . . . . .	42	66
Employees and Other Normal Subjects . . . . .	79	129
	876	2,054

During the course of the year the following papers were published, accepted or prepared for publication:

A. Published:

1. Rosenzweig, S. *Some implicit common factors in diverse methods of psychotherapy.* Am. J. Orthopsychiat., July, 1936.

B. Accepted:

1. Cohen, L. H. and Patterson, M. *Heart-rate reactions to pain stimulation.* J. Gen. Psychol. 1937.
2. Rosenzweig, S. *Schools of psychology: a complementary pattern.* Phil. of Sci. January, 1937.
3. Harris, A. J. and Shakow, D. *The clinical significance of measures of scatter in the Stanford-Binet.* Psychol. Bull. 1937.
4. Rosenzweig, S. and Shakow, D. *Mirror behavior in schizophrenic and normal subjects.* J. Nerv. and Ment. Dis. 1937.
5. Rosenzweig, S. *The experimental measure of types of reaction to frustration.* For book to be published by Harvard Psychological Clinic in 1937.
6. Rosenzweig, S. and Shakow, D. *Play technique in schizophrenia and other psychoses. I. Rationale.* Am. J. Orthopsychiat. January, 1937.
7. Shakow, D. and Rosenzweig, S. *Play technique in schizophrenia and other psychoses. II. An experimental study of schizophrenic constructions with play material.* Am. J. Orthopsychiat. January, 1937.

C. Prepared:

1. Wegrocki, H. J. *Masochistic motives in the literary and graphic art of Bruno Schulz.*
2. Wegrocki, H. J. *The ethnological approach to personality: a critique.*
3. Goldman, R. and Shakow, D. *The vocabulary of normal subjects.*
4. Radlo, G. *Competitive and cooperative behavior in schizophrenics.*
5. Altman, C. H. and Shakow, D. *A comparison of the performance of matched groups of schizophrenic patients, normal subjects and delinquent subjects on some aspects of the Stanford-Binet.*

At meetings the following papers were presented by members of the Department: American Psychological Association, Hanover, N. H., September 2-5 1936.

1. D. Shakow — Mental sets in schizophrenia studied in a discrimination reaction setting. \*

2. M. Rickers — The Reaction of schizophrenics to interrupted tasks.
3. E. Hanfmann — A concept formation test in schizophrenia.
4. S. Rosenzweig — The preferential repetition of successful and unsuccessful activities.
5. E. Rodnick — A comparison of the development of delayed and twice conditioned responses.

Brown University, May 20, 1936 — S. Rosenzweig — Experimental study of personality mechanisms.

American Orthopsychiatric Association, Cleveland, Ohio, February 20, 1936 — S. Rosenzweig and D. Shakow — Play technique in schizophrenia.

Among the new pieces of apparatus developed during the course of the year were one for the galvanic skin reflex, a new calibration device for the cardiographometer, and a rebuilding of the chronoscope and auxiliary equipment for reaction-time study.

Plans for the coming year include the continuation of the experiments using play technique with schizophrenic patients, continuation of the reaction-time experiments, further work with devices studying tension release, and further study of the adaptive and integrative capacities of the schizophrenic.

#### LIBRARY REPORT

*George L. Banay, Ph.D., Librarian*

##### *I. Medical Library:*

The year of 1936 is one of marked expansion in the history of the Medical Library. By reorganizing the offices in the Executive Building we were fortunate to obtain the use of the former Treasurer's Office adjoining the Medical Library. After removing the partition that separated the two rooms, we were able to double the floor and shelf space in our library. The new quarters are roomy, well lighted and well ventilated and accommodate eighteen readers instead of six, as formerly. In addition to this we use the Trustees' Room for a reading room as in other years and are now able to accommodate thirty-six readers. All new furnishings are of light oak and match the shelves, giving a pleasing impression to the new quarters.

With the aid of a special appropriation voted by the Legislature last year, we were able to remodel the old library annex in the basement and equip it with modern fireproof steel shelves. By keeping duplicate, old, and little-used material in the basement, we shall have enough shelf room in the main library for years to come.

Keeping in step with the physical development, the library continued to grow. To indicate the various activities, the following items are cited:

*Periodicals.* — Although we could not add any new periodicals to our subscription list this year, we had all the important magazines at our disposal. We have 106 periodicals in 1936 as compared with the 115 of the previous year.

Of this number the hospital subscribes to 92, 2 are paid for by the Memorial Foundation for Neuro-Endocrine Research, 3 are donated by Dr. Bryan, 3 by Dr. Hoskins, 2 by Dr. Sleeper, 2 by Dr. Looney and 2 come in free from the Federal Government.

Of these periodicals, 4 are in French, 9 in German, 2 in Italian and 91 in English.

*Circulation.* — The Medical Library circulated 692 volumes last year.

*Inter-library Loans.* — The Librarian maintained contact with other libraries and we borrowed 182 volumes from 8 libraries, as follows:

Boston Medical Library . . . . .	122
New York Academy of Medicine . . . . .	32
Harvard College Library . . . . .	17
Clark University Library . . . . .	7
Smith College Library . . . . .	1
Yale University Library . . . . .	1
Columbia University Library . . . . .	1
University of Minnesota Library . . . . .	1

*Medical Library Association.* — We maintained our membership in the Medical Library Association. This Association is of the greatest benefit to all medical libraries in supplying them with missing and out-of-print material for the nominal

charge of the postage. In 1936 we received 98 volumes from the Association and gave in exchange 64 volumes to 48 medical libraries.

*New Books.* — 88 new volumes have been added to the shelves, some of them to the Child Guidance Clinic Library.

*Binding.* — We bound 165 volumes during the year including the ones received from the exchange.

*Present State.* — On November 30th, 1936, the Medical Library had:

3,626 bound volumes of periodicals	
99 unbound volumes of periodicals	
1,589 bound volumes of books	
13 unbound volumes of books	
1,033 catalogued reprints and pamphlets	
1,041 old books	
431 lantern slides	

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Total 7,832 items

This is an increase of 1,378 items over the previous year and is accounted for chiefly in the classifications "reprints" and "slides".

*Services.* — The Librarian continued to circulate the bibliographies and abstracts, prepared many special bibliographies and translated about 15 foreign medical articles. The bibliographies, abstracts and translations are filed in the Medical Library. We now have more than 3,000 classified abstracts and 2 volumes of translations.

*W.P.A. Projects.* — Three projects submitted by the Medical Library were approved by the Federal Government and six stenographers were assigned for the work. Projects accepted were recataloguing of books, compilation of a complete bibliography on Schizophrenia, and the supplementing of our abstract collection on Schizophrenia, comprising publications from 1917 to 1932 when our abstract service was started. All three projects are practically completed at this date. We have recatalogued the books and reprints in the Medical Library, in the Laboratories, and at the Child Guidance Clinic. The bibliography and abstract cards are typed and it remains only to classify these under subject headings. After this work is done, we shall have a complete file of bibliography and abstracts on the subject of "Schizophrenia".

## II. General Library:

The General Library moved into new quarters in 1936. We were given the use of the former Steward's Office, a large, well-lighted and well-ventilated room, opposite the Staff Dining Room. Twenty-three new bookcases, 18 Windsor arm chairs, 3 settees and a new desk for the Librarian complete the new equipment. After last year's general reorganization, when we eliminated all the torn and obsolete books, the shelves look rather empty at the present, but we shall build up the Library systematically and hope to fill up the new shelves in the not too remote future. From January to August, 1936, Miss Helen M. Gale, a graduate of the Simmons College Library School, was in charge of the General Library. Under her guidance the Library progressed very satisfactorily. It is hoped that in January, 1937 an Occupational Therapy student will be assigned to the library to help with the routine work and to take the book truck to the closed wards twice a week with books for the patients who are unable to come to the Library.

In 1936, we added 501 volumes to the shelves.

On November 30, 1936 the General Library had:

Fiction and Non-Fiction	2,639
Serials	74
Reference books	48
Bound magazines	54
Bibles and prayer books	37
Stereoscope slides	100

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Total 2,952 items

Forty-eight popular magazines and six daily newspapers are subscribed to by the Hospital.



In addition to this the Library borrows 150 books every three months from the Worcester Public Library to circulate among the patients and employees.

Arrangements have been made with the Public Library to send 100 volumes every three months to the Summer Street Department. In addition, 100 books are sent every three months from the General Library in the main Hospital, and ten popular magazines and newspapers are subscribed to for this Department.

As in other years, five sub-branches on the closed wards were maintained. The Occupational Therapy Department cooperated in the most helpful way by taking books and magazines to the patients on these wards.

The Library is well patronized by patients and employees, the average monthly attendance being 1,054 patients and 273 employees.

During the year the Library circulated 7,117 volumes and had 11,723 reading visitors.

A few churches of Worcester and the Free Public Library sent to us old books and magazines regularly. We express our thanks to all who have given books and magazines to the Library.

#### CHAPLAIN'S DEPARTMENT *Carroll A. Wise, D.D., Chaplain*

During the past year the religious services for the patients have been held regularly each Sunday, with a service at the main hospital and one at the Summer Street Department. These services have been planned with the needs and problems of the mental patient in mind, and the hymnal used is one that was edited especially for use in mental hospitals. The sermon, which is always brief, is prepared with a background of knowledge of the needs and condition of the patients, and seeks to present healthy and constructive religious ideas and attitudes and to stimulate within the patients a desire for improvement. Care is taken not to reinforce unhealthy religious ideas in patients. The monthly communion service, which was instituted in the previous year, has been continued regularly because of the splendid response of the patients to this type of service.

During the year the Chaplain made regular weekly visits to the various wards of the hospital, including the wards on the medical services. Special attention was given to new patients, and to patients referred by members of the staff. The cooperation of the nurses in this work has been excellent. In many instances, the Chaplain communicated with ministers in the community whom patients requested to see.

The demand on the Chaplain for talks to groups in the community in regard to the work of the hospital was very heavy during the past year, as can be seen by the fact that a total of seventy talks were made and a large number referred to other members of the hospital organization. These talks were given to various types of clubs, church groups, young people's organizations and school groups. The subjects included the following: Handling Inner Tensions, Casting Out Devils, Religion and Mental Health, Problems of the Pastor, and Problems in Personality Development.

In addition to these talks the Chaplain also conducted a twelve week course for local ministers. The course met one morning each week at the hospital, and was attended by twelve clergymen. In this course we discussed some of the psychological aspects of mental disorder, together with problems involved in the relation of mental hygiene and religion and the work of the pastor.

During the year the systematic visitation of eight of our women's wards by a group of women representing the Worcester County Federation of Church Women's Clubs was continued as in past years under the supervision of the Chaplain. The visits of these women to the wards was greatly enjoyed by many of the patients.

In cooperation with the Council for the Clinical Training of Theological Students, Inc., a group of ten theological students participated in the clinical course for theological students during the summer of 1936. These students came from various seminaries and represented a number of denominations. The purpose of this course is to give theological students a first hand contact with individuals who are maladjusted in life, to enable them to study first hand some of the problems of life adjustment, to acquaint them with the techniques and aims of the various specialists such as the psychiatrist and social worker so that they, as ministers, will be able to cooperate intelligently with these specialists in the community, and to study the

needs and problems of mental hygiene from the viewpoint of the religious worker. In no sense do we try to make these students into psychiatrists, but rather to train them so that they may make their contribution as ministers to the solution of the problems of life adjustment in their parishes. Further information in regard to this work is available to any who are interested.

In addition to this course, which extends for twelve weeks during the summer, the chaplain also gave lectures to other student groups in the hospital, such as the social service and occupational therapy students. These lectures dealt with the religious problems involved in mental disorder.

#### CHILD GUIDANCE CLINIC

*Milton E. Kirkpatrick, M.D., Director*

During the year past, the Child Guidance Clinic has rendered service to 349 children. This includes much more service than is implied in the total number of cases which have been handled. In every case the parents have been interviewed, some of them many times and it is often the case that they are in need of much more treatment than their children. There has been a reduction in the total number of children seen throughout the year due to the large number of cases which were closed in 1934-1935 (400) due to changes in the professional staff. It is unwise and often impossible to transfer children from social workers and psychiatrists who are leaving the Clinic to other staff members who are replacing them. The intake is practically the same — 188 cases in 1935 and 182 cases in 1936. Many more cases have been carried over into 1937. There are several reasons for this, chief among which is the better selection of the material with which we are to work. The staff recognizes that treatment techniques have as yet not been devised which will be equally applicable to all types of cases. We must frankly face the fact that some situations in light of our present knowledge are untreatable and that more research is necessary before these children can be helped. In some cases there is little demand on the part of parents; they come to the Clinic in response to pressure excited by the school or some social agency.

Two research projects have been completed. In the closing of cases, we often think in terms of the problems presented at the time the child was referred and the eventual outcome. "Case Closing: A Retrospective Study in Treatment" is an intensive study of 35 cases and it has already been of value to the staff in the selection of its material. The second study, "First Interviews as a Guide to Treatment" has been of similar value. Retrospective studies of success and failure will eventually make possible a more thorough treatment.

A total of 45 children were referred from the Juvenile Court. A new plan has been inaugurated whereby the Juvenile Court Probation Officer has done an intensive piece of case work with a selected group of boys under the supervision of the Chief Social Worker at the Clinic. It has been unnecessary to commit any of these boys to a correctional institution. This confirms our opinion that probation should be good social case work — no more or less — and that when intelligently applied it becomes an extremely useful method of controlling anti-social behavior.

In community relationships, the Clinic has continued to render service to the Oakdale Training School for Boys, the Worcester Girls' Club, the Children's Friend Society, and the Associated Charities. The weekly treatment clinics at the Shrewsbury and Sterling public schools have been well supported and children who otherwise would be more or less neglected have had the advantage of clinic study. As soon as this type of school service can be intelligently extended without interfering with the clinic program, we would like to do so.

The training of psychiatric social workers for the child guidance field is being continued with little change. We have four students in social work sent here for field work from Smith College and Simmons College. Members of the staff have participated actively in the teaching program at the hospital in courses given for nurses and occupational therapy workers. There has been a decrease in the number of public lectures given by staff members and this is in keeping with the clinic policy of giving this service where it will do the most good. In order that the community may have a better understanding of the activities of the Clinic, a motion picture, "Just Children", has been filmed and favorably received whenever shown. This picture depicts the child in conflict with his parents, his accep-

tance, study and treatment at the Clinic. It answers a long felt need for a better method of acquainting people with the work of the Clinic.

### *Annual Service Report*

#### I. *Report of Case Load:*

A. Carried Cases:	Total
1. Cases carried over from last year . . . . .	159
2. Intake a. New cases accepted . . . . .	182
b. Old cases reopened	
(1) last closed before present year . . . . .	7
(2) last closed within present year . . . . .	1
3. Total cases open at sometime in this year . . . . .	349
4. Cases taken from service . . . . .	31
5. Cases carried forward to next year . . . . .	318
B. Closed cases followed up (not reopened) . . . . .	49
C. Applications rejected . . . . .	4
D. Applications withdrawn . . . . .	10

#### II. *Type of Service Classification:*

A. New Accepted Cases:	
6. Full Service a. Clinic staff cases . . . . .	87
b. Cooperative cases . . . . .	95
c. Full service not a or b . . . . .	0
7. Special service (Advice) . . . . .	0
8. Mental Health Study . . . . .	0
9. Total new cases accepted . . . . .	182
B. Total Cases Open at Sometime in the Year:	
10. Full service a. Clinic staff cases . . . . .	149
b. Cooperative cases . . . . .	129
c. Full service not a or b . . . . .	29
11. Special service (advice) . . . . .	42
12. Total cases open at sometime this year . . . . .	349
C. Cases taken from Service:	
13. Full service a. Clinic staff cases . . . . .	19
b. Cooperative cases . . . . .	12
c. Full service not a or b . . . . .	0
14. Special service (advice) . . . . .	0
15. Mental Health Study . . . . .	0
16. Total cases closed during this year . . . . .	31

#### III. *Sources Referring New Accepted Cases:*

	<i>Full</i>	<i>Special</i>	<i>Total</i>
17. Agencies a. Social . . . . .	25	18	43
b. Medical . . . . .	4	4	8
18. Schools, public . . . . .	4	1	5
19. Juvenile Court . . . . .		45	45
20. Private physicians . . . . .	4	7	11
21. Parents, Relatives . . . . .	48	22	70
22. Total new cases accepted . . . . .	85	97	182

#### IV. *Summary of Work with or about Patients:*

A. By Psychiatrists:	Total
1. Interviews with patients a. for examination . . . . .	194
b. for treatment . . . . .	599
2. Interviews about patients . . . . .	181
3. Physical examinations by clinic staff members . . . . .	14
B. By Psychologists:	
1. Interviews with patients a. for examination . . . . .	184
b. for re-examination . . . . .	15
c. for treatment . . . . .	480
2. Interviews about patients . . . . .	66



## C. By Social Workers:

1. Interviews in Clinic . . . . .	823
2. Interviews outside Clinic . . . . .	484
3. Telephone calls . . . . .	879

## D. Number of Cases given Initial Staff Conference

1. Full service a. Clinic staff cases . . . . .	92
b. Cooperative cases . . . . .	64
2. Special service . . . . .	12

E. Number of open cases given service during year by workers, approx. 500

F. Referral Interviews . . . . . 103

V. *Personnel Report* (Average staff during year)

		<i>Full-time</i>	<i>Part-time</i>
A. Regular Staff	a. Psychiatrists . . . . .	2	
	b. Psychologists . . . . .	2	
	c. Social workers . . . . .	2-3	
	d. Clerical workers . . . . .	2	1
B. Staff in Training	a. Social workers . . . . .	2-4	

VI. *Operating Schedule:*

A. Schedule of Clinic days and hours: 9 to 5 daily; 9 to 12 Saturday

B. Schedule of Attendance of Psychiatrist: 9 to 5 daily; 9 to 12 Saturday

*Educational Services:*

Number of lectures and courses given by Dr. Kirkpatrick, 17; by Miss Walton, 6; by Dr. Hill, 3; by Miss Clark, 7.

*Committee Meetings and Conferences Attended by Staff Members:*

<i>Number</i>	<i>Month</i>	<i>Occasion</i>
1	February	American Orthopsychiatric Meeting, Cleveland, Ohio.
5	March	Psychiatric Round Table.
1	May	American Psychiatric Meeting, St. Louis.
1	July	International Conference of Social Work, London, Eng.
1	July	International School of Social Work, London, Eng.
1	July-Aug.	Smith College School for Social Work.

*Visitors to Clinic — Other than Interested in Individual Patients:*

a. Number from city, 45; b. Number from outside, 24.

Miss Bertha Reynolds, Smith College School for Social Work.

Col. Edgar Erickson, Oakdale School.

Mr. Everett Kimball, Smith College School for Social Work.

Dr. Burham Jones, Clark University.

Dr. Eugene Walker, Springfield Hospital.

Dr. George Stenvenson, National Committee for Mental Hygiene.

Miss Mildred Scoville, National Committee for Mental Hygiene.

Mrs. Converse, Brookfield, P. T. A.

## THE INSTITUTIONAL FREEZING OF VEGETABLES

*Oakleigh Jauncey, Head Farmer*

In growing vegetables for a market that demands a frozen product, there must exist a relation between acreage planted and the consuming market.

In the case of institution markets the farm manager must work in close touch with the steward. The steward knows what his demands are and it would be folly for the farm manager to go ahead and plant crops with no idea of how he is going to market them. The steward can give the farm manager a schedule depending on when the crops begin to mature, that will enable him to know how much seed to order and how many acres to plant. In other words the farm manager knows just how much and everything else being equal, just what results he may expect.

A good steward will have variety in his vegetable menus and will have menus containing only vegetables that are palatable. In having a variety, waste is cut down to a minimum and this goes also for palatability.

During the fresh vegetable season the demands on the farm should be spread over as long a period as possible. All the beans should not be planted at once because when the crop comes into bearing, the market for same would be flooded. A series of plantings should be made so that labor for harvesting can be spread out

as well as the product and a better utilization of all vegetables by the fresh and frozen market will be maintained. This spreading out of plantings also helps the labor of weeding. Instead of having weeding all coming in at once it is spread out and better work can be accomplished.

The harvesting of crops in relation to frozen vegetables is very important. Crops should be planted so that they all can be picked in their prime, but this, owing to so many uncertain conditions, is impossible. One must gauge the harvesting operations so that the crop if it cannot be picked in its prime, should be started before its prime so that a large bearing crop will carry through the before prime, prime and just a little past the prime period. This practice renders a pretty fair product.

There must be sufficient labor at hand so that when a crop is ready for harvesting it can be handled in as little time as possible. Labor must be able to work in groups, the best labor being used in the preparation room where very important work is carried on. Work can always be found for the harvesting groups when not picking, such as weeding, cleaning and many other tasks about the farm.

The delivery from the field to the preparation room must be efficient. The delivery system is one of the most important factors in successful frozen products.

In the preparation room goes on the very important task of processing the products. The appearance of the packages depends in a good measure upon the work that is done in the preparation room.

Have labor in this room that is dependable and is interested in turning out a good product. Have the preparation room attractive. Whitewash or paint the walls, use some colored paint where possible. The addition of plants lends a great deal to the pleasantness of the seat of such an important operation. A radio is the greatest addition that can be made because it swings all labor into a rhythm of surprising production and interest of work that is very gratifying.

Design working benches that will systematize the work to a degree of high efficiency. Bring the work to the workers and not the workers to the work. Have a person responsible for all production and this person should be one with a good personality and one interested in the work to be done. At times it is necessary to work with knives and sharp instruments but no great difficulty has been experienced in this method if thought is given to labor.

The washing, ice baths and packing room are of great importance. Some vegetables are washed as they come from the field before being sent to the tables for other processes of preparation. As low a temperature as possible in the ice baths should be maintained. Just above freezing, if possible, but this is difficult to maintain with natural ice. As soon as products are run through the ice baths they should be run through the cutting machine or packed as the case may be. Great care should be exercised in packing so that the maximum is packed into the boxes. The layers of ice between the vegetables are very important as it is this ice that maintains the low temperature en route to the freezing plants, and holds the low temperature until the sub-zero temperature in the freezer has done its work. As soon as possible, deliver packed products to the freezer and these trips cannot be made too often so long as a pay load can be made.

Pick out a good storage plant with rooms large enough to be assigned to the production for freezing. The room for holding and freezing vegetables should be clean and well ventilated as poor sanitary conditions and poor ventilation will impart foreign tastes to the products and render them useless for food.

Maintain as low a temperature as possible in the freezer. This is usually about 12 to 14 degrees below zero in the ordinary plant. These temperatures must be steady and not fluctuating as fluctuating temperatures have a very detrimental effect on the keeping and physical qualities of the products.

The cost per unit must be such that economical storage of products can be accomplished from one bearing season to another. As the holding time in storage progresses, so does the natural market for vegetables and a balance must be maintained between storage and when fresh products arrive in the market again.

A schedule of drawing products out of storage should be in vogue. Vegetables must be withdrawn for palatability and variety. The produce placed in storage first should be withdrawn first. The market for storage products should be known



and the withdrawing of products is just a matter of calculation of the demands over the storage period.

Upon withdrawing vegetables from storage, a good system of delivery to the point of consumption is as important as delivery into storage. As soon as delivery is made, the vegetable should be cooked. Frozen vegetables can be placed in boiling water with very little change in cell structure of the vegetable, but if allowed to remain to defrost before cooking, with very little exception, the product will be injured very greatly by cell structure change.

Some vegetables can be defrosted before cooking such as peppers and some fruits, but they are more the exception than the rule.

Fruits can be frozen about the same as vegetables. In the freezing of fruits they lose much of their sugar content and a simple syrup is added to the packing before freezing. All frozen fruits should be packed in liquid tight containers for obvious reasons.

In the successful freezing of vegetables, there are many varieties and types to consider, all of which present a special problem for the proper processing due to their physical make up. There is the leaf type, which has to be removed from the field as soon as possible, so that it will not wilt too much, and upon being received at the preparation room, has to go through a series of tap water and ice water baths so that they can be made to look fresh, of good color and crisp so that they will retain these qualities upon being frozen.

The solid type of vegetables such as carrots, cabbage, etc., are a cool vegetable as they come from the field. The ice water baths play no important part until after the vegetables are cut up and are ready to pack. Upon being prepared for washing, the cut up vegetables are run through a rinse water and a bath of ice water to bring them down to the coldest temperature possible before sending to the freezer.

Semi solid types such as tomatoes and peppers are transported from the field as soon as possible, although there is no need for transportation as soon as picked because these types do not deteriorate quickly in the field and are simply run through the sorting tables and washed with ordinary tap water and packed for storage according to quality demanded in the pack.

The pod type of vegetable is a little more effected by heat in the field than the solid or semi solid type. The aim should be for frequent transportation of these types of vegetables from the hot fields and run through the processing tables at once, through the tap water and ice water baths and finally through the machine for cutting. The delivery of packed boxes should be as soon as possible so that the enzymes in the juices of these vegetables do not get a chance for reaction due to high temperatures thus causing a poor product after being taken out of storage for cooking.

Shell type of vegetables are not affected by field heat. As soon as delivered to the preparation room, they should have the hard skin removed if they are not tender and then cut up as desired and not washed after being cut up as washing has a great tendency to remove valuable juices of palatability. All washing should be done as the product comes from the field before going to the preparation room.

All vegetables are packed with layers of ice except the semi-solid type and upon being placed in the freezer, allow the cold air to circulate and bring about effective freezing.

In the freezing of vegetables and fruit, there is much to accomplish and it is study and painstaking operations that will bring the assurance of satisfactory results. In time a great increase of vegetables will be frozen for consumption as it is a matter of delivery and education of the consumers to the value of frozen products as compared to canned goods. The color and palatability is certainly maintained to a higher degree in most cases than in canning. It is cheaper and less loss is suffered from spoilage. The loss in institution freezing over a period of five years has been about nothing compared to the hundreds of thousands of pounds frozen.

Presented are the figures showing the amounts of products frozen since 1930 and also varieties.



*Varieties and Pounds of Vegetables Frozen:*

VARIETY	1930	1931	1932	1933	1934	1935
Asparagus . . . . .	—	2,250	1,825	2,500	—	—
Beans, string . . . . .	22,257	24,300	25,657	26,056	39,438	41,916
Beet greens . . . . .	—	—	7,920	8,460	14,340	11,640
Cabbage . . . . .	—	—	20,083	7,920	20,580	—
Celery . . . . .	—	—	2,700	7,640	6,600	8,040
Chard . . . . .	—	—	5,415	10,410	18,225	18,760
Carrots . . . . .	—	—	—	—	24,960	24,015
Cauliflower . . . . .	—	—	—	—	760	—
Corn . . . . .	750	15,900	41,200	34,580	12,380	—
Egg plant . . . . .	—	—	—	—	200	—
Peas . . . . .	60	2,184	—	1,600	1,600	—
Peppers . . . . .	11,134	3,820	3,460	6,620	4,760	6,280
Kale . . . . .	—	—	—	—	350	—
Spinach . . . . .	—	—	—	—	8,190	5,015
Summer squash . . . . .	—	—	4,320	3,820	4,520	4,880
Broccoli . . . . .	—	—	—	—	60	—
Tomatoes . . . . .	28,500	46,600	44,250	29,850	77,650	17,600
Strawberries . . . . .	—	1,560	3,149	385	1,204	—

FARM PLANTING CHART  
*Oakleigh Jauncey, Head Farmer*

In most institutions there exists in a large measure, an overproduction and an underproduction of farm crops at certain periods during the planting and harvesting season. During the overproduction periods the institution is flooded with huge masses of vegetables which it cannot possibly hope to utilize with any degree of economy. Also at times there is underproduction which results in the necessity of going on the open vegetable market and procuring the vegetables which the farm is unable to supply. Such practice as mentioned results in large losses financially to the Commonwealth.

In the past few years there has been devised and is in use at the Worcester State Hospital a planting chart. This planting chart enables the farm manager to lay out a program for planting and harvesting whereby he can supply the hospital with fresh vegetables in season and store at farm and freeze in cold storage enough vegetables to supply the hospital until the following season's crops are ready for bearing and harvest.

In order to have a planting chart mean anything, the institution steward, chef and farm manager should have a conference sufficiently advanced of the planting season to determine the amounts of vegetables the hospital needs. This conference should be held every year as varieties and types of vegetables change from time to time. The planting chart is figured on a weekly basis. The chart is so devised that space is given horizontally for fifty-two weeks and vertically for variety of vegetables. In the horizontal spaces are inserted in black the estimated figures of desired delivery of farm produce by the week, and in red, the figure of actual delivery as the crops come into bearing and harvest.

From the planting chart, the farm manager makes up his seed list and orders same in advance of the planting season. Also from the planting chart is taken into consideration, the variety of seed that can be used which is best adaptable to the soil in question and the amounts of seed required for planting, as the purchase of seed above requirements is costly and absolutely unnecessary. In the purchase of seed the varieties for maturity at different periods of seasonal planting must be considered and this data can all be studied from the planting chart.

After the requirements for the planting chart are established the farm manager plants according to his chart when the proper seasons are at hand. The earlier varieties of seeds are planted first and are not all planted at the same time but each crop is divided into several plantings for efficient harvesting, weeding and to avoid flooding the institution market.

When the different crops are harvested and sent to the institution the weekly amounts are recorded on the planting chart in red in horizontal spaces according to weeks as the actual delivery of farm crops. The figures in red must compare as near as possible with the estimated delivery of farm crops and will with all things being equal and the weather being rather considerate.

By the use of the planting chart the steward, chef and farm manager know far in advance just what vegetables are to be expected and available at any time

through the year with an average season. This system eliminates the possibility of the farm manager delivering vegetables to the institution that cannot be consumed and thus wasted. It spreads the planting of all seeds over a period not only for efficient harvesting but for efficient weeding of crops.

The planting chart is very flexible if a freezing program is decided upon, the extra purchase of seeds and acres planted can be calculated with no difficulty and will eliminate any guess work. The requirements for the storage of frozen products can be determined and allowances made in addition to the regular fresh vegetable consumption.

#### STEWARD'S DEPARTMENT

*H. W. Smith, Steward*

The department has functioned very satisfactorily during the year 1936. There have been very few changes in personnel — none in the key positions except the Head Storekeeper, Mr. W. H. Daly, Jr., who was appointed to the Steward's position at the Monson State Hospital in December, 1935.

The maintenance appropriation granted this hospital for 1936 was properly expended and recorded, and the closing of the year's business showed no overdrafts.

The feeding of the patients and employees during the year has not been satisfactory. This was due partly to increased prices but more particularly to the restrictions of the ration allowance. This ration is heavy on farinaceous food and deficient in milk, eggs and fresh fruit. It does not permit the wide variety which is essential for a well balanced diet. A careful and thorough study of the nutritional problems of the hospital is indicated. The basis of the food service, the ration, should be revised in line with modern developments in knowledge of food. The cafeteria service and kitchens have run smoothly during the past year, although replacement of equipment has not been properly attended to because of lack of funds.

The store room facilities at this hospital are inadequate to care for the needs of approximately 3,000 persons. Lack of proper space for the storage of dry goods and perishables necessitates the duplication of supply orders at too frequent intervals. This condition increases the paper work of the hospital considerably and causes many other inconveniences. A new store house is badly needed for this hospital.

In the early part of 1935 the entire lot of laundry machinery we are using today was disassembled, repaired and put back into service. If this had not been done, nearly every piece of it would be in the junk heap today. It was old and antiquated then, and is worse now. During 1936 we put 2,065,389 pounds of dry clothes through this laundry and have done this by continually "babying" every piece of machinery in the building. In 1937 the new hydrotherapy building will be opened and operated which will throw an additional load on this laundry equipment. Something will have to be done during 1937 to correct this condition or the Worcester State Hospital will be without laundry facilities in the not too distant future.

#### REPORT OF SOME OF THE WORK ACCOMPLISHED DURING 1936

*Anton Swenson, Foreman Mechanic*

1. Salisbury 2, walls, ceilings and woodwork repaired and painted.
2. Appleton 1, walls, ceilings and woodwork repaired and painted.
3. Folsom 1, walls, ceilings and woodwork repaired and painted.
4. Howe 1, walls, ceilings and woodwork repaired and painted.
5. Gage Hall 1, water section, new concrete floor and tile, new plumbing and painting.
6. Lowell Home 1st floor, walls, ceilings and woodwork repaired and painted.
7. Large portion of doors and windows painted.
8. New Treasurer's Office and Steward's Office constructed in Sargent Building.
9. Quimby Building. Wooden floor removed. New concrete floor, new linoleum and new plumbing installed.
10. Nurses Home. All old plumbing removed and new plumbing installed.
11. Lincoln 3 and Philip 1. Two new clothing rooms (new shelves and coat racks) installed.



ENGINEER'S REPORT  
*Warren G. Proctor, Chief Engineer*

The years 1936-1937 will mark the third major change in the power plant at this hospital.

The first power plant occupied a space that is now used as a stock room and was installed about 1870. In 1902 the present boiler room was built. This year has seen the beginning of a change which is to modernize the equipment and result in a more compact installation with greater efficiency of service.

The present engine room will be taken over for a machine shop and the space formerly occupied by the boilers will be used for the turbines and the engine. A much larger boiler will be installed in the space made available beside our present boilers.

The new plant will, when complete, consist of two turbines designed to deliver 300 K. W. each of electricity, and one engine which will deliver 300 K.W. Thus there will be available for the hospital 900 K.W., a value three times as great as was delivered by the old engines.

The new boiler will be rated at 500 H.P., which is 150 H.P. greater than any of our boilers now in service. The total boiler H.P. will be 1544.

The current will be changed from direct to alternating which will enable us to transmit the power to a greater distance and all of the cottages and the farm group will be supplied from our own power plant.

The refrigeration plant will also be modernized; the use of ammonia will be discontinued and an odorless non-poisonous gas will be used for a refrigerant.

The old square stack installed for the first power plant has been removed and many of the old bricks were used to raise the roof of our present boiler and engine room. This stack passed up through the center of our industrial building and occupied space which now becomes available for the enlarging of shops and work rooms.

The fuel for boilers has been changed from coal to oil. The old coal pit has been divided into four compartments. One contains three 25,000 gallon tanks for oil supply, another provides space for oil pumps and hot water storage tanks. The other two compartments are reserved for coal if at any time it should prove to be more economical to return to that fuel.

It is estimated that the larger power units will enable us to furnish power and lights with one engine, instead of three, and one boiler, instead of two, a change which will materially decrease the yearly consumption of fuel.

#### RECOMMENDATIONS

Recommendations for replacements in the physical plant have been made in former years, and it is imperative that some of this be done at a very early date. Perhaps our greatest need is a new laundry. In 1933 I submitted a recommendation for a program which embraced the construction of a new laundry, conversion of the present laundry building into a store house, and renovation of the present straw barn into an industrial building. Our present laundry is entirely inadequate, and the machinery is so old and antiquated that we live in constant apprehension that it will break down and completely paralyze the institution. The destruction of clothing, ordinary wear and tear on our clothes and general lowering of morale due to irritation on both the part of employee and patient is the inevitable result of a condition of this kind.

The facilities this hospital has for the storage of supplies is costly, inefficient and leads to a considerable loss because of spoilage. The present laundry building would make an ideal store house, both from the standpoint of location and construction. It could be changed to meet the needs with a minimum cost and the second stage in this program would be the construction of a store house in the present laundry building.

The hospital is badly in need of a fire alarm system which will notify the employees that there is a fire in the building. This hospital is under the protection of an organized, efficient city department. Therefore, the business of the hospital personnel is to remove the patients from the scene of the fire, and to keep them comfortable while the firemen are taking care of the matter of fighting the fire. Without an alarm system, it is impossible to adequately fulfill this function and



unless something is done about installing such a system we may have a loss of life due to our inability to get our employees to the scene of the fire.

The Summer Street Department of the hospital cares for five hundred patients. The facilities for food service are entirely inadequate and should not be tolerated any longer than is necessary to provide funds for improving them. The patients are fed in two basement dining rooms, entirely unsuited for the purpose they are used for. If one cafeteria could be installed on the first floor, in the space now occupied by the occupational therapy room, and the employees dining room and the kitchen placed on the same level it would add a great deal to the efficiency of the food service.

I again call attention to the need for carrying on a program of floor replacements. The floors of the main hospital are old, badly splintered, and it is almost impossible to keep them clean and in good condition. They constitute a bad fire risk. If one building was renovated each year in a period of ten years the entire building would be converted into a sanitary and fire proof structure. This program could be carried on with relatively small expense. The Quimby wards have already been changed and the improvement is remarkable.

*Renovation of Thayer and Folsom Wards.* — These are the medical and surgical wards of the hospital, and if they were modernized and proper facilities installed for the transportation of patients and service of food, they would be ideal for the purpose. They permit proper classification of patients and are of easy access for administrative purposes, but in their present condition the hospital works under a tremendous handicap. There are no means by which the patients may be transported from one floor to another except by hand litters. The food service is very inadequate, inefficient and wasteful. I recommend that elevators be installed in these wards so that the patients may be transported from one floor to the other on litters and the same elevators can be used for the transportation of food trucks from one floor to another with the diet kitchen in the basement.

It seems obvious that many of these changes should be made to bring the hospital plant up to the point of efficiency and modernize it in every way. This is not only desirable from an investment point of view, but it will contribute much to the treatment of patients.

In conclusion, I wish to express my gratitude to the Board of Trustees and the officers and employees of the hospital for their constant support and cooperation during the year. Board members have been unflinching in their encouragement, and I am deeply grateful for this. The officers and employees have worked diligently and to a common end towards the progress of the hospital, and it is with much pleasure that I make this public acknowledgement to both of these groups.

Respectfully submitted,  
WILLIAM A. BRYAN,  
*Superintendent.*

VALUATION	
November 30, 1936	
REAL ESTATE	
Land, 589.16 acres . . . . .	\$444,570.00
Buildings and betterments . . . . .	2,370,652.31
	\$2,815,222.31
PERSONAL PROPERTY	
Travel, transportation and office expenses . . . . .	\$10,166.74
Food . . . . .	16,633.76
Clothing and materials . . . . .	26,438.02
Furnishings and household supplies . . . . .	270,630.07
Medical and general care . . . . .	58,749.47
Heat and other plant operation . . . . .	8,700.82
Farm . . . . .	47,268.72
Garage and grounds . . . . .	9,546.09
Repairs . . . . .	19,016.44
	\$467,150.13
SUMMARY	
Real estate . . . . .	\$2,815,222.31
Personal property . . . . .	467,150.13
	\$3,282,372.44

## FINANCIAL STATEMENT

To the Department of Mental Diseases:

I respectfully submit the following report of the finances of this institution for the year ending November 30, 1936.

STATEMENT OF EARNINGS			
Board of Patients			\$65,139.70
Personal services			245.00
Sales:			
Food		\$2,225.04	
Clothing and materials		29.84	
Furnishings and household supplies		51.48	
Medical and general care		112.91	
Heat and other plant operations		10.50	
Garage and grounds		2.55	
Repairs ordinary		93.55	
Farm: (horse, \$6; cows, calves and pigs, \$1,073.30; hides, \$33.57; vegetables bags, etc., \$19.80)		1,132.67	
Total Sales			3,658.54
Miscellaneous:			
Interest on bank balances		\$165.00	
Rents		1,232.92	
Com. on Pay Sta. Telephone		133.80	
Miscellaneous		26.33	
Total miscellaneous			1,558.05
Total earnings for the year, November 30, 1936			70,601.29
Total cash receipts reverting and transferred to the State Treasurer			70,616.79
Accounts receivable outstanding December 1, 1935		45.00	
Accounts receivable outstanding November 30, 1936		29.50	
Accounts receivable increased			\$15.50
MAINTENANCE APPROPRIATION			
Balance from previous year, brought forward			\$30,508.57
Appropriation, current year			1,030,215.00
Total			\$1,060,723.57
Expenditures as follows:			
Personal services		\$572,606.26	
Food		168,077.65	
Medical and general care		37,360.72	
Religious instruction		2,780.00	
Farm		25,788.77	
Heat and other plant operation		87,530.30	
Travel, transportation and office expenses		9,653.38	
Garage and grounds (garage, \$4,743.93; grounds, \$1,008.70)		5,752.63	
Clothing and materials		15,534.36	
Furnishings and household supplies		36,061.59	
Repairs ordinary		16,055.06	
Repairs and renewals		15,268.90	
Total maintenance expenditures			\$992,469.62
Balance of maintenance appropriation, November 30, 1936			68,253.95
			\$1,060,723.57
SPECIAL APPROPRIATIONS			
Balance December 1, 1935, brought forward			\$151,872.69
Appropriations for current year			285,500.00
Total			\$437,372.69
Expended during the year (see statement below)		\$94,256.06	
Reverting to Treasury of Commonwealth			94,256.06
Balance November 30, 1936, carried to next year			\$343,116.63

APPROPRIATION	Project and Chap. Acts	Total Amount Appropriated	Expended during fiscal year	Total Expended to date	Balance at end of year
Alterations for fire protection, M.S.P.M.-20; PWA D. 6243.		\$90,000.00	\$819.66	\$89,404.87	\$595.13
Standpipe M.S.P.M.-39; PWA D. 4640		42,000.00	4,299.45	40,966.13	1,033.87
Fireproof balconies, M.S.P.M.-48 PWA D. 4465		136,000.00	8,324.89	109,705.11	28,294.89
Sprinklers and rewiring, M.S.P. M.-49; PWA D. 5308		115,138.38	14,483.68	113,997.63	1,140.75
Hydrotherapy Building, M.S.P. M.-50; PWA D. 4657		125,000.00	34,362.92	111,582.55	13,417.45
Window calking and weather strip	249-1935	5,000.00	1,605.75	1,605.75	3,394.25
Roof repairs	249-1935	7,700.00	7,697.38	7,697.38	2.62
Quimby Ward Building renovation	249-1935	18,000.00	14,994.55	14,994.55	3,005.45
Mechanical refrigeration	249-1935	14,400.00	—	—	14,400.00
Porch—Administration building	304-1936	5,500.00	.67	.67	5,499.33
Plumbing—Summer St. Hospital	304-1936	10,000.00	5,682.98	5,682.98	4,317.02
New boilers, stokers, etc.	304-1936	270,000.00	1,984.13	1,984.13	268,015.87
		\$840,738.38	\$94,256.06	\$497,621.75	\$343,116.63

## PER CAPITA

During the year the average number of patients has been, 2,400.09.

Total cost of maintenance, \$992,469.62.

Equal to a weekly per capita cost of (52 weeks to year), \$7.9521.

Total receipts for the year, \$70,616.79.

Equal to a weekly per capita of, \$.5658.

Total net cost of Maintenance for year, \$921,852.83.

Net weekly per capita, \$.73863.

Respectfully submitted,

MARGARET T. CRIMMINS,

Treasurer.

## STATMENT OF FUNDS

November 30, 1936

## CANTEEN FUND

Balance on hand November 30, 1935	\$914.33
Receipts	18,506.10
	\$19,420.43
Expended	18,527.63
	\$892.80

## Investments

Worcester Depositors Corp. (Class A Certificate)	\$136.00
Mechanics National Bank	565.33
Cash on hand November 30, 1936	191.47
	\$892.80

## PATIENT'S FUND

Balance on hand November 30, 1935	\$7,867.33
Receipts	11,077.91
Interest	165.00
	\$19,110.24
Expended	10,060.53
Interest paid to State Treasurer	165.00
	\$10,225.53

\$8,884.71

## Investments

Worcester County Institution for Savings	\$1,000.00
Worcester Five Cents Savings Bank	1,000.00
Worcester Mechanics Savings Bank	1,000.00
Peoples Savings Bank	1,500.00
Bay State Savings Bank	1,500.00
Worcester Depositors Corp. (Class A. cert.)	85.00
Balance Mechanics National Bank	2,408.67
Cash on hand December 1, 1936	391.04
	\$8,884.71

## ROCKEFELLER RESEARCH PROJECT

Balance on hand November 30, 1935	\$1,671.61
Receipts to November 30, 1936	16,291.62
	\$17,963.23
Expended to November 30, 1936	15,462.11

Balance on hand November 30, 1936 \$2,501.12

## Investments

Worcester County Trust Co. \$2,501.12

## CLEMENT FUND

Balance on hand November 30, 1935	\$1,000.00
Income	27.50
	\$1,027.50
Expended	27.50
	\$1,000.00

Balance on hand November 30, 1936 \$1,000.00



<i>Investments</i>			
Worcester County Institution for Savings			\$1,000.00
LEWIS FUND			
Balance on hand November 30, 1935		\$1,331.99	
Income		43.75	
Expended			\$1,375.74
			39.77
Balance on hand November 30, 1936			\$1,335.97
<i>Investments</i>			
Worcester Five Cents Savings Bank		\$1,300.00	
Balance Mechanics National Bank		35.97	
			\$1,335.97
MANSON FUND			
Balance on hand November 30, 1935		\$1,062.73	
Income		24.36	
			\$1,087.09
<i>Investments</i>			
Millbury Savings Bank		\$1,086.26	
Balance Mechanics National Bank		.83	
			\$1,087.09
WHEELER FUND			
Balance on hand November 30, 1935		\$1,001.92	
Income		27.50	
			\$1,029.42
<i>Investments</i>			
Worcester Mechanics Savings Bank		\$1,000.00	
Balance Mechanics National Bank		29.42	
			\$1,029.42

## STATISTICAL TABLES

AS ADOPTED BY THE AMERICAN PSYCHIATRIC ASSOCIATION PRESCRIBED BY  
THE MASSACHUSETTS DEPARTMENT OF MENTAL DISEASES

TABLE 1. *General Information*

(Data correct at end of institution year November 30, 1936)

Date of opening as a hospital for mental diseases: January 18, 1833.

Type of hospital: State.

Hospital plant:

Value of hospital property:

Real estate, including buildings . . . . . \$2,815,222.31

Personal property . . . . . 467,150.13

Total

Total acreage of hospital property owned, 589.16.

Additional acreage rented, 75.

Total acreage under cultivation during previous year, 177.

Officers and employees:

	Actually in Service at at End of Year			Vacancies at End of Year		
	M.	F.	T.	M.	F.	T.
Superintendents . . . . .	1	—	1	—	—	—
Assistant physicians . . . . .	10	—	10	2	—	2
Clinical assistants . . . . .	—	2	2	—	—	—
Total physicians . . . . .	11	2	13	2	—	2
Stewards . . . . .	1	—	1	—	—	—
Resident dentists . . . . .	1	—	1	—	—	—
Pharmacists . . . . .	1	—	1	—	—	—
Graduate nurses . . . . .	2	71	73	—	—	—
Other nurses and attendants . . . . .	124	155	279	5	6	11
Occupational therapists . . . . .	—	4	4	—	1	1
Social worker . . . . .	—	4	4	—	—	—
All other officers and employees . . . . .	144	75	219	9	3	12
Total officers and employees . . . . .	284	311	595	16	10	26

*Classification by Diagnosis September 30, 1936*

Census of Patient Population at end of year:

WHITE:	Actually in Hospital			Absent from Hospital but still on Books		
	M.	F.	T.	M.	F.	T.
Insane . . . . .	1,133	1,150	2,283	192	228	420
Mental defectives . . . . .	1	3	4	—	—	—
Alcoholics . . . . .	1	—	1	—	—	—
All other cases . . . . .	5	3	8	1	7	8
Total . . . . .	1,140	1,156	2,296	193	235	428
OTHER RACES:						
Insane . . . . .	26	30	56	3	4	7
Total . . . . .	26	30	56	3	4	7
Grand Total . . . . .	1,166	1,186	2,352	196	239	435

Patients under treatment in occupational-therapy classes, including physical training, on date of report

	M.	F.	T.
Other patients employed in general work of hospital on date of report	86	149	235
Average daily number of all patients actually in hospital during year	525	592	1,117
Voluntary patients admitted during year	1,134.68	1,160.49	2,295.17
Persons given advice or treatment in out-patient clinics during year	4	1	5
	240	190	430

TABLE 2. *Movement of Patient Population for the Year Ended September 30, 1936*  
(Data in all of the following tables are based on the Statistical Year, October 1, 1935, to September 30, 1936)

	TOTAL			REGULAR COURT COMMITMENT (INSANE)			OBSERVATION			TEMPORARY CARE			VOLUNTARY		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Patients on books of institution September 30, 1935	1,289	1,343	2,632	1,283	1,337	2,620	4	4	8	-	-	-	2	2	4
Admissions during year:															
First admissions	327	257	584	249	233	482	69	16	85	6	7	13	3	1	4
Readmissions	96	85	181	64	66	130	29	13	42	2	6	8	1	-	1
Total admissions	423	342	765	313	299	612	98	29	127	8	13	21	4	1	5
Transfers from other mental hospitals	17	33	50	17	33	50	-	-	-	-	-	-	-	-	-
Total received during year	440	375	815	330	332	662	98	29	127	8	13	21	4	1	5
Total on books during year	1,729	1,718	3,447	1,613	1,669	3,282	102	33	135	8	13	21	6	3	9
Discharged from books during year:															
As recovered	68	27	95	52	17	69	15	10	25	1	-	1	-	-	-
As improved	95	100	195	83	93	176	11	5	16	-	1	1	1	1	2
As unimproved	22	13	35	18	11	29	4	-	4	-	2	2	-	-	-
As without psychosis	69	32	101	2	5	7	57	15	72	7	10	17	3	2	5
Total discharged to community	254	172	426	155	126	281	87	30	117	8	13	21	4	3	7
Transferred to other mental hospitals	16	15	31	16	15	31	-	-	-	-	-	-	-	-	-
Died during year	97	106	203	90	105	195	7	1	8	-	-	-	-	-	-
Total discharged, transferred and died during year	367	293	660	261	246	507	94	31	125	8	13	21	4	3	7
Patients remaining on books of hospital at end of year:															
In hospital	1,166	1,186	2,352	1,156	1,184	2,340	8	2	10	-	-	-	2	-	2
On parole or otherwise absent	196	239	435	196	239	435	-	-	-	-	-	-	-	-	-
Total	1,362	1,425	2,787	1,352	1,423	2,775	8	2	10	-	-	-	2	-	2

## SUPPLEMENTARY DATA

	Males			Females			Total
Average daily number of patients on books during year.							2,692.05
Actually in institution during year				1,327.46			1,364.59
In family care				1,135.30			1,140.84
On visit				21.33			83.17
On escape				156.41			104.50
Number of patients actually remaining in institution September 30, 1936:				14.42			296.16
State							15.25
Reimbursing				1,090			2,157
Ex-service patients paid by Federal Government				76			195
Number of patients in family care September 30, 1936				24			1
State				86			110
Private				18			80
Number of non-insane patients in hospital at end of institution year:				24			30
Mentally defective				3			4
Others				6			9

TABLE 3. *Nativity of First Admissions and of Parents of First Admissions*

NATIVITY	PATIENTS			PARENTS OF MALE PATIENTS			PARENTS OF FEMALE PATIENTS		
	M.	F.	T.	Fathers	Mothers	Both Parents	Fathers	Mothers	Both Parents
United States <sup>1</sup>	157	139	296	66	71	56	66	72	59
Austria	2	—	2	1	2	1	—	1	—
Canada <sup>2</sup>	19	31	50	37	34	30	41	42	38
China	—	—	—	1	1	1	—	—	—
Denmark	—	—	—	—	1	—	1	1	1
England	5	3	8	10	13	7	10	7	6
Finland	3	2	5	4	5	4	3	3	3
France	—	2	2	1	1	1	2	3	1
Germany	—	2	2	3	—	—	5	4	4
Greece	4	1	5	4	4	4	1	1	1
Holland	—	—	—	1	1	1	—	—	—
India	—	1	1	—	—	—	—	—	—
Ireland	11	18	29	45	43	38	44	42	40
Italy	12	6	18	17	17	17	12	12	12
Norway	2	—	2	4	2	2	—	—	—
Poland	5	5	10	8	8	8	6	6	6
Portugal	1	1	2	1	1	1	2	1	1
Russia	2	2	4	3	3	3	4	4	4
Scotland	1	6	7	1	1	—	7	9	7
Sweden	9	4	13	11	11	11	8	8	8
Turkey in Asia	3	—	3	3	3	3	—	—	—
Other Countries	13	8	21	14	15	14	8	8	8
Unknown	—	2	2	14	12	10	13	9	9
Total	249	233	482	249	249	212	233	233	208

<sup>1</sup>Persons born in Hawaii, Porto Rico and the Virgin Islands should be recorded as born in the U. S.<sup>2</sup>Includes Newfoundland.





TABLE 5. *Citizenship of First Admissions*

	Males	Females	Total
Citizens by birth . . . . .	157	139	296
Citizens by naturalization . . . . .	24	12	36
Aliens . . . . .	38	43	81
Citizenship unknown . . . . .	30	39	69
Total . . . . .	249	233	482

TABLE 6. *Race of First Admissions Classified with Reference to Principal Psychoses*

RACE	TOTAL			With syphilitic meningo-encephalitis			With other forms of syphilis			With epidemic encephalitis			With other infectious diseases			Alcoholic psychoses		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
African (blk)	2	4	6	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—
Armenian	4	3	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bulgarian	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chinese	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch and Flemish	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
English	24	15	39	—	1	1	—	—	—	—	—	—	—	—	—	4	—	4
Finnish	4	3	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
French	35	28	63	8	—	8	—	1	1	—	—	—	—	—	—	4	—	4
German	1	3	4	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—
Greek	4	1	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hebrew	5	6	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Irish	52	55	107	1	2	3	1	—	1	—	—	—	1	1	2	16	1	17
Italian <sup>1</sup>	18	12	30	3	—	3	—	—	—	—	—	—	—	—	—	1	—	1
Lithuanian	4	5	9	—	1	1	—	—	—	—	—	—	—	—	—	1	—	1
Portuguese	1	1	2	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Scandinavian <sup>2</sup>	14	10	24	—	1	1	—	—	—	—	—	—	—	—	—	4	—	4
Scotch	—	8	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Slavonic <sup>3</sup>	10	5	15	—	—	—	—	—	—	—	—	—	—	—	—	3	—	3
Syrian	3	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other specific races	4	—	4	1	—	1	1	—	1	—	—	—	—	—	—	—	—	—
Mixed	53	58	111	1	4	5	1	1	2	—	1	1	—	1	1	3	—	3
Race unknown	8	16	24	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Total	249	233	482	15	11	26	3	2	5	—	1	1	1	2	3	36	2	38

TABLE 6. *Race of First Admissions Classified with Reference to Principal Psychoses — Continued*

RACE	Due to drugs, etc.			Traumatic psychoses			With cerebral arterio-sclerosis			With other disturbances of circulation			With convulsive disorders (epilepsy)			Senile psychoses		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
African (black)	—	—	—	—	—	—	1	1	2	—	—	—	—	—	—	—	—	—
Armenian	—	—	—	—	—	—	2	2	4	—	—	—	—	—	—	—	—	—
Bulgarian	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chinese	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch and Flemish	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—
English	—	—	—	—	—	—	7	5	12	—	—	—	—	—	—	3	2	5
Finnish	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
French	—	—	—	—	—	—	8	7	15	1	—	1	4	—	4	—	1	1
German	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	1	1
Greek	—	—	—	—	—	—	2	—	2	—	—	—	—	—	—	—	—	—
Hebrew	—	—	—	—	—	—	2	2	4	—	—	—	—	—	—	—	—	—
Irish	—	1	1	1	—	1	12	10	22	1	—	1	1	1	2	2	6	8
Italian <sup>1</sup>	—	—	—	—	—	—	2	2	4	—	—	—	—	—	—	—	—	—
Lithuanian	—	—	—	—	—	—	1	1	2	—	—	—	—	—	—	—	1	1
Portuguese	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scandinavian <sup>2</sup>	—	—	—	—	—	—	5	2	7	—	—	—	—	—	—	—	—	—
Scotch	—	—	—	—	—	—	—	2	2	—	—	—	—	—	—	—	—	—
Slavonic <sup>3</sup>	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—
Syrian	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—
Other specific races	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	2	—	2	19	10	29	—	—	—	1	—	1	5	3	8
Race unknown	—	—	—	—	—	—	4	7	11	1	—	1	—	—	—	1	—	1
Total	—	1	1	3	—	3	67	53	120	3	—	3	6	1	7	11	14	25

<sup>1</sup>Includes "North" and "South."<sup>2</sup>Norwegians, Danes and Swedes.<sup>3</sup>Includes Bohemian, Bosnian, Croatian, Dalmatian, Herzegovinian, Montenegrin, Moravian, Polish, Russian, Ruthenian, Servian, Slovak, Slovenian.

TABLE 6. *Race of First Admissions Classified with Reference to Principal Psychoses* — Continued

RACE	Involutional psychoses			Due to other metabolic diseases, etc.			Due to new growth			With organic changes of nervous system			Psycho-neuroses			Manic-depressive psychoses		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
African (black)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Armenian	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
Bulgarian	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chinese	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Dutch and Flemish	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
English	-	1	1	-	-	-	1	-	1	-	-	-	-	1	1	3	-	3
Finnish	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
French	-	5	5	-	1	1	-	-	-	1	1	-	2	1	3	4	-	4
German	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Greek	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Hebrew	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	1
Irish	1	3	4	1	-	1	-	-	-	-	-	-	2	1	3	4	5	9
Italian <sup>1</sup>	-	2	2	1	2	3	-	-	-	1	-	1	1	1	2	1	1	2
Lithuanian	-	1	1	-	-	-	1	-	1	-	-	-	1	-	-	-	-	-
Portuguese	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scandinavian <sup>2</sup>	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-
Scotch	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slavonic <sup>3</sup>	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	1	-	1
Syrian	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other specific races	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mixed	1	4	5	2	2	4	-	-	-	-	1	1	1	3	4	4	11	15
Race unknown	-	1	1	-	1	1	-	-	-	-	-	-	-	1	1	-	3	3
Total	2	18	20	5	8	13	2	1	3	2	2	4	8	8	16	18	21	39

TABLE 6. *Race of First Admissions Classified with Reference to Principal Psychoses* — Concluded

RACE	Dementia praecox			Paranoia and paranoid conditions			With psychopathic personality			With mental deficiency			Undiagnosed psychoses			Without psychoses		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
African (black)	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Armenian	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgarian	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
Chinese	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dutch and Flemish	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
English	6	5	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Finnish	3	2	5	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
French	3	8	11	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-
German	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greek	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hebrew	2	2	4	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Irish	7	20	27	-	1	1	-	1	1	1	1	2	-	-	-	-	1	1
Italian <sup>1</sup>	8	2	10	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
Lithuanian	1	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Portuguese	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
Scandinavian <sup>2</sup>	3	7	10	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
Scotch	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Slavonic <sup>3</sup>	5	3	8	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Syrian	-	-	-	1	-	1	-	-	-	1	-	1	-	-	-	-	-	-
Other specific races	1	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Mixed	11	15	26	1	2	3	1	-	1	-	-	-	-	-	-	-	-	-
Race unknown	1	2	3	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-
Total	55	72	127	6	8	14	1	1	2	4	2	6	1	-	1	-	5	5

<sup>1</sup>Includes "North" and "South".<sup>2</sup>Norwegians, Danes and Swedes.<sup>3</sup>Includes Bohemian, Bosnian, Croatian, Dalmatian, Herzegovinian, Montenegrin, Moravian, Polish, Russian, Ruthenian, Servian, Slovak, Slovenian.



TABLE 7. *Age of First Admissions Classified with Reference to Principal Psychoses*

PSYCHOSES	TOTAL			0-14 years			15-19 years			20-24 years			25-29 years		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
With syphilitic meningo- encephalitis	15	11	26	-	1	1	-	-	-	-	-	-	-	-	-
With other forms of syphilis	3	2	5	-	-	-	1	-	1	-	-	-	-	-	-
With epidemic encephalitis	-	1	1	-	-	-	-	-	-	1	1	-	-	-	-
With other infectious diseases	1	2	3	-	-	-	-	-	-	1	1	-	-	-	-
Alcoholic psychoses	36	2	38	-	-	-	-	-	-	-	-	-	1	-	1
Due to drugs, etc.	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Traumatic psychoses	3	-	3	-	-	-	-	-	-	-	-	-	1	-	1
With cerebral arteriosclerosis	67	53	120	-	-	-	-	-	-	-	-	-	-	-	-
With other disturbances of circulation	3	-	3	-	-	-	-	-	-	-	-	-	-	-	-
With convulsive disorders (epilepsy)	6	1	7	-	-	-	1	-	1	1	-	1	2	-	2
Senile psychoses	11	14	25	-	-	-	-	-	-	-	-	-	-	-	-
Involuntional psychoses	2	18	20	-	-	-	-	-	-	-	-	-	-	-	-
Due to other metabolic dis- eases, etc.	5	8	13	-	-	-	-	-	-	-	3	3	1	2	3
Due to new growth	2	1	3	-	-	-	-	-	-	-	-	-	-	-	-
With organic changes of nerv- ous system	2	2	4	-	1	1	-	-	-	-	-	-	-	1	1
Psychoneuroses	8	8	16	-	-	-	1	-	1	-	1	1	2	1	3
Manic-depressive psychoses	18	21	39	-	-	-	-	-	-	1	4	5	1	-	1
Dementia praecox	55	72	127	1	-	1	4	2	6	14	10	24	17	9	26
Paranoia and paranoid con- ditions	6	8	14	-	-	-	-	-	-	-	-	-	-	1	1
With psychopathic person- ality	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-
With mental deficiency	4	2	6	-	-	-	-	-	-	1	1	-	-	-	-
Undiagnosed psychoses	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Without psychoses	-	5	5	-	-	-	-	1	1	-	-	-	-	2	2
Total	249	233	482	1	2	3	7	3	10	16	21	37	25	16	41

TABLE 7. *Age of First Admissions Classified with Reference to Principal Psychoses — Continued*

PSYCHOSES	30-34 years			35-39 years			40-44 years			45-49 years			50-54 years			55-59 years		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
With syphilitic meningo-encephalitis . . .	2	-	2	2	2	4	2	2	4	2	3	5	3	1	4	3	2	5
With other forms of syphilis . . .	-	-	-	-	-	-	-	1	1	-	1	1	1	-	1	-	-	-
With epidemic encephalitis . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With other infectious diseases . . .	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	1
Alcoholic psychoses . . .	4	-	4	4	1	5	6	-	6	7	-	7	6	-	6	4	-	4
Due to drugs, etc. . .	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
Traumatic psychoses . . .	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
With cerebral arteriosclerosis . . .	-	-	-	-	-	-	-	-	-	1	2	3	1	3	4	3	7	10
With other disturbances of circulation . . .	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-
With convulsive disorders (epil.) . . .	-	1	1	1	-	1	1	-	1	-	-	-	-	-	-	-	-	-
Senile psychoses . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Involuntional psychoses . . .	-	-	-	-	-	-	-	3	3	-	6	6	1	5	6	-	3	3
Due to other metabolic diseases, etc . . .	-	1	1	-	1	1	-	-	-	-	1	1	1	-	1	1	-	1
Due to new growth . . .	-	-	-	1	-	1	-	1	1	-	-	-	1	-	1	-	-	-
With organic changes of nervous system . . .	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-
Psychoneuroses . . .	-	2	2	1	1	2	-	-	-	2	2	4	-	-	-	2	-	2
Manic-depressive psychoses . . .	1	2	3	5	7	12	1	2	3	-	1	1	7	1	8	1	1	2
Dementia praecox . . .	7	9	16	6	12	18	-	13	13	3	6	9	3	8	11	-	2	2
Paranoia and paranoid conditions . . .	2	-	2	-	-	-	1	-	1	-	1	1	2	3	5	-	2	2
With psychopathic personality . . .	-	-	-	-	1	1	1	-	1	-	-	-	-	-	-	-	-	-
With mental deficiency . . .	2	1	3	-	-	-	1	-	1	-	-	-	1	-	1	-	-	-
Undiagnosed psychoses . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Without psychoses . . .	-	-	-	-	1	1	-	1	1	-	-	-	-	-	-	-	-	-
Total . . .	18	16	34	20	26	46	14	24	38	17	23	40	29	21	50	14	18	32

TABLE 7. *Age of First Admissions Classified with Reference to Principal Psychoses — Concluded*

PSYCHOSES	60-64 years			65-69 years			70-74 years			75-79 years			80-84 years			85 years and over		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
With syphilitic meningo- encephalitis	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With other forms of syphilis	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
With epidemic encephal- alitis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With other infectious dis- eases	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alcoholic psychoses	3	-	3	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-
Due to drugs, etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Traumatic psychoses	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
With cerebral arterio- sclerosis	6	9	15	20	6	26	17	15	32	12	3	15	6	6	12	1	2	3
With other disturbances of circulation	1	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
With convulsive disorders (epilepsy)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Senile psychoses	-	1	1	-	3	3	2	4	6	2	5	7	5	-	5	2	1	3
Involuntional psychoses	-	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Due to other metabolic diseases, etc.	1	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Due to new growth	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
With organic changes of nervous system	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Psychoneuroses	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manic-depressive psy- choses	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dementia praecox	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
Paranoia and paranoid conditions	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With psychopathic per- sonality	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With mental deficiency	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Undiagnosed psychoses	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
Without psychoses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	14	16	30	25	10	35	19	20	39	16	8	24	11	6	17	3	3	6



TABLE 8. Degree of Education of First Admissions Classified with Reference to Principal Psychoses

Psychoses	Total		Illiterate		Reads Only		Reads and Writes		Common School		High School		College		Unknown	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
With syphilitic meningo-encephalitis.	15	11	2	3	1	1	1	1	8	4	2	5	1	1	1	1
With other forms of syphilis	3	2	1	1	1	1	1	1	2	1	1	1	1	1	1	2
With epidemic encephalitis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
With other infectious diseases	36	22	1	38	1	1	2	1	26	11	4	1	1	2	1	3
Alcoholic psychoses	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Due to drugs, etc.	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Traumatic psychoses	67	53	4	120	1	1	10	2	35	25	6	3	1	1	11	16
With cerebral arteriosclerosis	3	3	1	1	1	1	1	1	5	1	1	1	1	1	1	1
With other disturbances of circulation	11	14	1	7	1	1	1	1	9	9	1	2	1	1	1	3
With convulsive disorders (epilepsy)	6	18	2	20	1	1	1	1	13	14	2	2	1	1	1	1
Senile psychoses	12	18	1	13	1	1	1	1	2	5	1	2	1	1	1	1
Involuntal psychoses	5	8	1	3	1	1	1	1	2	1	1	3	1	1	1	1
Due to new growth	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1
Due to other metabolic diseases, etc.	2	2	1	4	1	1	1	1	1	1	1	2	1	1	1	1
With organic changes of nervous system	8	8	1	16	1	1	1	1	7	6	1	1	1	1	1	1
Psychoneuroses	18	21	1	39	1	1	1	1	11	18	8	7	1	1	2	2
Manic-depressive psychoses	55	72	2	127	1	1	1	1	26	39	19	25	1	3	6	2
Dementia praecox	6	8	1	14	1	1	1	1	5	4	1	1	1	1	1	1
Paranoia and paranoid conditions	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1
With psychopathic personality	4	4	1	6	1	1	1	1	2	2	1	1	1	1	1	1
With mental deficiency	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Undiagnosed psychoses	1	5	1	1	1	1	1	1	2	2	1	1	1	1	1	1
Without psychoses	1	1	1	1	1	1	1	1	2	2	1	1	1	1	2	2
Total	249	233	13	482	1	3	21	4	141	126	42	50	8	5	23	52

TABLE 9. *Environment of First Admissions Classified with Reference to Principal Psychoses*

PSYCHOSES	TOTAL		0-2,499		2,500-9,999		10,000-24,999		25,000-49,999		50,000-99,999		100,000-249,999		500,000+		Unknown
	M.	F. T.	M.	F. T.	M.	F. T.	M.	F. T.	M.	F. T.	M.	F. T.	M.	F. T.	M.	F. T.	
With syphilitic meningo-encephalitis . . . . .	15	11	26		4	4	2	1	1	1			7	5		5	1
With other forms of syphilis . . . . .	3	12	5		1	1	1	1									
With epidemic encephalitis . . . . .	1	1	1						1	1			1	1			
With other infectious diseases . . . . .	36	2	38		4	2	2	1	2	2	1		17	1	8	2	
Alcoholic psychoses . . . . .	3	1	3				1	1					1				
Due to drugs, etc. . . . .	3	1	3				1	1					1				
Traumatic psychoses . . . . .	67	53	120		8	8	4	5					33		6	4	
With cerebral arteriosclerosis . . . . .	3	3	3		1	1	1	1			2		2				
With other disturbances of circulation . . . . .	11	14	7		3	3	1	1					1				
With convulsive disorders (epilepsy) . . . . .	2	18	20		1	1	1	1					5		1	1	
Senile psychoses . . . . .	2	18	13		2	2	1	1					12				
Involutional psychoses . . . . .	5	2	1		4	4	1	1					1				
Due to other metabolic diseases, etc. . . . .	2	1	3		2	2	1	1					1				
Due to new growth . . . . .	2	2	4				1	1					1				
With organic changes of nervous system . . . . .	8	8	16		1	1	2	2	4	1	2		2		1	1	
Psychoneuroses . . . . .	18	21	39		4	5	3	3	2	4			5				
Manic-depressive psychoses . . . . .	55	72	127		7	10	17	8	13	4	5		19		8	14	
Dementia praecox . . . . .	6	8	14		1	1	1	1					4		3	3	
Paranoia and paranoid conditions . . . . .	1	1	2		1	1	1	1					3		1	1	
With psychopathic personality . . . . .	4	1	2		1	1	1	1					3				
With mental deficiency . . . . .	1	5	5														
Undiagnosed psychoses . . . . .																	
Without psychoses . . . . .	249	233	482		41	39	80	24	26	50	6	3	118	115	27	32	
Total . . . . .				19	6	25		11	10	21	9		233		59		5

TABLE 10. *Economic Condition of First Admissions Classified with Reference to Principal Psychoses*

PSYCHOSES	Total			Dependent			Marginal			Comfortable			Unknown		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
With syphilitic meningo-encephalitis	15	11	26	4	2	6	10	9	19	-	-	-	1	-	1
With other forms of syphilis	3	2	5	-	1	1	3	1	4	-	-	-	-	-	-
With epidemic encephalitis	-	1	1	-	-	-	-	1	1	-	-	-	-	-	-
With other infectious diseases	1	2	3	-	-	-	1	2	3	-	-	-	-	-	-
Alcoholic psychoses	36	2	38	9	-	9	26	1	27	-	-	-	1	1	2
Due to drugs, etc.	-	1	1	-	-	-	-	1	1	-	-	-	-	-	-
Traumatic psychoses	3	-	3	-	-	-	3	-	3	-	-	-	-	-	-
With cerebral arteriosclerosis	67	53	120	22	14	36	42	34	76	-	-	-	3	5	8
With other disturbances of circulation	3	-	3	1	-	1	1	-	1	-	-	-	1	-	1
With convulsive disorders (epilepsy)	6	1	7	2	-	2	4	1	5	-	-	-	-	-	-
Senile psychoses	11	14	25	4	2	6	7	12	19	-	-	-	-	-	-
Involuntary psychoses	2	18	20	-	-	-	2	18	20	-	-	-	-	-	-
Due to other metabolic diseases, etc.	5	8	13	2	-	2	3	8	11	-	-	-	-	-	-
Due to new growth	2	1	3	-	-	-	1	1	2	-	-	-	1	-	1
With organic changes of nervous system	2	2	4	-	-	-	2	2	4	-	-	-	-	-	-
Psychoneuroses	8	8	16	1	1	2	7	6	13	-	1	1	-	-	-
Manic-depressive psychoses	18	21	39	-	4	4	17	16	33	1	-	1	-	1	1
Dementia praecox	55	72	127	4	12	16	47	59	106	-	1	1	4	-	4
Paranoia and paranoid conditions	6	8	14	-	1	1	6	6	12	-	-	-	-	1	1
With psychopathic personality	1	1	2	-	-	-	1	1	2	-	-	-	-	-	-
With mental deficiency	4	2	6	1	1	2	3	1	4	-	-	-	-	-	-
Undiagnosed psychoses	1	-	1	-	-	-	1	-	1	-	-	-	-	-	-
Without psychoses	-	5	5	-	3	3	-	2	2	-	-	-	-	-	-
Total	249	233	482	50	41	91	187	182	369	1	2	3	11	8	19

TABLE 11. *Use of Alcohol by First Admissions Classified with Reference to Principal Psychoses*

PSYCHOSES	TOTAL			Abstinent			Temperate			Intemperate			Unknown		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
With syphilitic meningo-encephalitis	15	11	26	5	7	12	5	4	9	5	-	5	-	-	-
With other forms of syphilis	3	2	5	1	-	1	2	1	3	-	-	-	-	1	1
With epidemic encephalitis	-	1	1	-	1	1	-	-	-	-	-	-	-	-	-
With other infectious diseases	1	2	3	-	-	-	-	-	-	1	1	2	-	1	1
Alcoholic psychoses	36	2	38	-	-	-	-	-	-	36	2	38	-	-	-
Due to drugs, etc.	-	1	1	-	1	1	-	-	-	-	-	-	-	-	-
Traumatic psychoses	3	-	3	-	-	-	1	-	1	2	-	2	-	-	-
With cerebral arteriosclerosis	67	53	120	18	40	58	31	6	37	10	1	11	8	6	14
With other disturbances of circulation	3	-	3	1	-	1	-	-	-	-	-	-	2	-	2
With convulsive disorders (epilepsy)	6	1	7	4	1	5	1	-	1	1	-	1	-	-	-
Senile psychoses	11	14	25	5	12	17	4	1	5	-	-	-	2	1	3
Involuntary psychoses	2	18	20	1	12	13	1	4	5	-	1	1	-	1	1
Due to other metabolic diseases, etc.	5	8	13	2	7	9	2	1	3	1	-	1	-	-	-
Due to new growth	2	1	3	1	1	2	-	-	-	-	-	-	1	-	1
With organic changes of nervous system	2	2	4	1	2	3	1	-	1	-	-	-	-	-	-
Psychoneuroses	8	8	16	5	8	13	3	-	3	-	-	-	-	-	-
Manic-depressive psychoses	18	21	39	2	15	17	11	3	14	5	-	5	-	3	3
Dementia praecox	55	72	127	15	55	70	27	14	41	10	1	11	3	2	5
Paranoia and paranoid conditions	6	8	14	1	5	6	4	2	6	1	-	1	-	1	1
With psychopathic personality	1	1	2	-	1	1	1	-	1	-	-	-	-	-	-
With mental deficiency	4	2	6	2	2	4	2	-	2	-	-	-	-	-	-
Undiagnosed psychoses	1	-	1	1	-	1	-	-	-	-	-	-	-	-	-
Without psychoses	-	5	5	-	3	3	-	1	1	-	-	-	-	1	1
Total	249	233	482	65	173	238	96	37	133	72	6	78	16	17	33













TABLE 14. *Discharges of Patients Classified with Reference to Principal Psychoses and Condition on Discharge*

PSYCHOSES	TOTAL			Recovered			Improved			Unimproved		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
With syphilitic meningo-encephalitis . . . . .	15	1	16	—	—	—	14	1	15	1	—	1
With other forms of syphilis . . . . .	2	1	3	—	—	—	2	1	3	—	—	—
With other infectious diseases . . . . .	—	2	2	—	1	1	—	1	1	—	—	—
Alcoholic psychoses . . . . .	37	4	41	17	2	19	18	2	20	2	—	2
Due to drugs, etc. . . . .	—	1	1	—	1	1	—	—	—	—	—	—
With cerebral arteriosclerosis . . . . .	12	13	25	3	2	5	8	7	15	1	4	5
With convulsive disorders (epilepsy) . . . . .	2	2	4	—	1	1	2	1	3	—	—	—
Senile psychoses . . . . .	5	6	11	—	—	—	3	6	9	2	—	2
Involuntional psychoses . . . . .	3	13	16	2	1	3	1	11	12	—	1	1
Due to other metabolic diseases, etc. . . . .	2	3	5	—	—	—	2	2	4	—	1	1
Due to new growth . . . . .	1	1	2	—	—	—	—	—	—	1	1	2
With organic changes of nervous system . . . . .	1	1	2	—	—	—	1	1	2	—	—	—
Psychoneuroses . . . . .	7	11	18	2	2	4	3	8	11	2	1	3
Manic-depressive psychoses . . . . .	17	18	35	13	4	17	4	14	18	—	—	—
Dementia præcox . . . . .	34	33	67	11	2	13	16	28	44	7	3	10
Paranoia and paranoid conditions . . . . .	3	5	8	—	—	—	1	5	6	—	—	—
With psychopathic personality . . . . .	6	2	8	3	—	3	3	2	5	—	—	—
With mental deficiency . . . . .	5	4	9	1	1	2	4	3	7	—	—	—
Without psychoses . . . . .	2	5	7	—	—	—	—	—	—	—	—	—
Primary behavior disorders . . . . .	1	—	1	—	—	—	1	—	1	—	—	—
Total . . . . .	155	126	281	52	17	69	83	93	176	18	11	29

TABLE 15. *Hospital Residence during This Admission of Court First Admissions Discharged during 1936*

PSYCHOSES	Number			Average Net Hospital Residence in Years		
	M.	F.	T.	M.	F.	T.
With syphilitic meningo-encephalitis . . . . .	9	—	9	.40	—	.40
With other forms of syphilis . . . . .	2	1	3	2.00	1.50	1.83
With other infectious diseases . . . . .	—	2	2	—	.33	.33
Alcoholic psychoses . . . . .	27	2	29	2.06	.41	1.95
Due to drugs, etc. . . . .	—	1	1	—	.04	.04
With cerebral arteriosclerosis . . . . .	12	12	24	.26	.42	.34
With convulsive disorders (epilepsy) . . . . .	1	2	3	.29	2.00	1.43
Senile psychoses . . . . .	5	3	8	.73	.34	.58
Involuntional psychoses . . . . .	3	12	15	1.60	1.34	1.40
Due to other metabolic diseases, etc. . . . .	2	2	4	.33	.33	.33
Due to new growth . . . . .	1	1	2	.04	.20	.12
With organic changes of nervous system . . . . .	1	—	1	.29	—	.29
Psychoneuroses . . . . .	6	10	16	.34	.25	.28
Manic-depressive psychoses . . . . .	11	10	21	.52	.43	.48
Dementia præcox . . . . .	25	21	46	1.16	.47	.84
Paranoia and paranoid conditions . . . . .	3	4	7	1.33	3.34	2.47
With psychopathic personality . . . . .	5	—	5	.61	—	.61
With mental deficiency . . . . .	3	3	6	1.06	6.73	3.90
Without psychoses . . . . .	1	4	5	.29	.18	.20
Primary behavior disorders . . . . .	1	—	1	.29	—	.29
Total . . . . .	118	90	208	1.05	.90	.98

TABLE 16. *Causes of Death of Patients Classified with Reference to Principal Mental Disorders*

CAUSES OF DEATH	TOTAL		With syphilitic meningoen- cephalitis		With other forms of syphilis		With epidemic encephalitis		Alcoholic psychoses		Traumatic psychoses		With cerebral arterio- sclerosis		With other disturbances of circulation		With convulsive disorders (epilepsy)	
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
<i>Infectious and Parasitic Diseases:</i>																		
Erysipelas . . . . .	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lethargic encephalitis (epidemic) . . . . .	1	1	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
Tuberculosis of the respiratory system . . . . .	3	12	15	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
Disseminated tuberculosis . . . . .	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Syphilis (non-nervous forms) . . . . .	2	1	3	-	1	1	-	-	-	-	-	-	1	1	-	-	-	-
<i>Cancer and Other Tumors:</i>																		
Cancer and other malignant tumors . . . . .	3	4	7	-	-	-	-	-	2	2	-	-	1	1	-	-	1	1
Tumor (non-cancerous) . . . . .	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Rheumatic Diseases, Nutritional Diseases, Dis- eases of the Endocrine Glands and Other General Diseases:</i>																		
Diabetes . . . . .	3	-	3	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-
Other diseases . . . . .	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Diseases of the Nervous System and Organs of Special Sense:</i>																		
Meningitis . . . . .	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cerebral hemorrhage . . . . .	5	4	9	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
General paralysis of the insane . . . . .	12	8	20	-	-	-	-	-	-	-	-	-	2	2	4	-	-	-
Other diseases of the nervous system . . . . .	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Diseases of the Circulatory System:</i>																		
Acute endocarditis . . . . .	1	1	2	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
Diseases of the myocardium . . . . .	5	5	10	-	1	1	-	1	1	1	-	-	1	1	-	-	-	-
Other diseases of the heart . . . . .	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arteriosclerosis . . . . .	5	6	11	-	-	-	-	-	1	1	-	-	3	2	5	1	1	-
Other diseases of the arteries . . . . .	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Diseases of the Respiratory System:</i>																		
Bronchopneumonia (including capillary bronchitis) . . . . .	26	35	61	-	-	-	-	-	1	1	-	-	13	12	25	-	-	-
Lobar pneumonia . . . . .	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other diseases (tuberculosis excepted) . . . . .	1	3	4	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-
<i>Diseases of the Digestive System:</i>																		
Diseases of the buccal cavity and annexa and of the pharynx and tonsils (including ade- noid vegetations) . . . . .	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hernia, intestinal obstruction . . . . .	2	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gastritis of the stomach . . . . .	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Diseases of the Genitourinary System:</i>																		
Nephritis (acute, chronic and unspecified) . . . . .	12	9	21	-	-	-	-	-	1	1	-	-	5	5	10	2	-	-







TABLE 17. Age of Patients at Time of Death Classified with Reference to Principal Psychoses

PSYCHOSES	TOTAL			0-14 years		20-24 years		25-29 years		30-34 years		35-39 years		40-44 years		45-49 years		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
With syphilitic meningo-encephalitis.	14	8	22	-	-	-	-	-	-	-	-	-	1	3	4	3	2	5
With other forms of syphilis	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With epidemic encephalitis	2	1	3	-	-	-	-	1	-	-	-	-	-	-	1	1	1	-
Alcoholic psychoses	8	-	8	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Traumatic psychoses	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With cerebral arteriosclerosis	33	24	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With other disturbances of circulation	3	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With convulsive disorders (epilepsy)	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Senile psychoses	10	23	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Involutional psychoses	2	3	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Due to other metabolic diseases, etc.	2	2	4	-	-	-	1	1	-	-	-	-	-	-	-	1	1	-
Due to new growth	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With organic changes of nervous system	2	2	4	-	1	1	-	-	-	-	-	-	-	1	-	-	1	-
Manic-depressive psychoses	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dementia praecox	8	30	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paranoia and paranoid conditions	1	4	5	-	-	-	-	1	2	3	1	3	4	-	-	2	2	1
With mental deficiency	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
Total	90	105	195	-	1	1	1	-	1	2	3	5	1	4	5	6	7	13



TABLE 17. *Age of Patients at Time of Death Classified with Reference to Principal Psychoses*

PSYCHOSES	50-54 years			55-59 years			60-64 years			65-69 years			70-74 years			75-79 years			80-84 years			85 years and over		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
With syphilitic meningo-encephalitis	3	-	3	-	1	1	2	-	2	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
With other forms of syphilis	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With epidemic encephalitis	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Alcoholic psychoses	-	-	-	-	1	1	1	-	1	-	-	-	1	-	1	-	1	-	1	-	-	-	-	-
Traumatic psychoses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With cerebral arteriosclerosis	-	1	1	1	2	3	4	6	10	5	2	7	7	6	13	11	1	12	5	6	11	-	-	-
With other disturbances of circulation	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
With convulsive disorders (epilepsy)	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Senile psychoses	-	-	-	-	-	-	-	4	4	1	3	4	4	3	7	3	7	10	2	3	5	-	-	3
Involutional psychoses	-	2	2	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Due to other metabolic diseases, etc.	1	1	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
With organic changes of nervous system	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
Manic-depressive psychoses	-	1	1	-	-	-	-	-	-	-	1	1	-	-	-	-	1	1	-	-	-	-	-	-
Dementia praecox	2	3	5	1	3	4	-	5	5	-	2	2	-	1	1	1	3	4	-	-	-	1	2	3
Paranoia and paranoid conditions	-	-	-	1	1	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With mental deficiency	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	6	9	15	5	8	13	12	15	27	10	10	20	13	11	24	17	13	30	8	10	18	1	5	6







TABLE 19. *Average Length of Hospital Residence during the Present Admission of All First Admissions in Residence on September 30, 1936*

PSYCHOSES	Number			Average Net Hospital Residence in Years		
	M.	F.	T.	M.	F.	T.
With syphilitic meningo-encephalitis	65	25	90	5.36	5.25	5.33
With other forms of syphilis	8	9	17	3.10	4.15	3.66
With epidemic encephalitis	6	4	10	6.16	8.75	7.20
With other infectious diseases	1	2	3	7.50	3.97	5.15
Alcoholic psychoses	99	8	107	9.39	8.73	9.34
Due to drugs, etc.	5	—	1	1.50	—	1.50
Traumatic psychoses	1	1	6	1.47	7.50	2.47
With cerebral arteriosclerosis	78	60	138	2.14	3.66	2.80
With other disturbances of circulation	2	—	2	.97	—	.97
With convulsive disorders (epilepsy)	7	5	12	10.55	6.09	8.69
Senile psychoses	22	45	67	4.03	4.17	4.13
Involutional psychoses	15	30	45	7.16	5.78	6.24
Due to other metabolic diseases, etc.	10	9	19	2.68	2.80	2.73
With organic changes of nervous system	10	3	13	4.69	3.83	4.49
Psychoneuroses	5	7	12	2.88	7.06	5.42
Manic-depressive psychoses	21	22	43	6.60	4.11	5.03
Dementia praecox	333	370	703	12.96	11.00	11.93
Paranoia and paranoid conditions	26	49	75	6.30	8.96	8.04
With psychopathic personality	8	10	18	11.12	12.39	11.83
With mental deficiency	45	47	92	10.81	10.32	10.56
Without psychoses	4	3	7	.96	1.13	1.03
Total	771	709	1,480	9.17	8.74	8.96

TABLE 19A. *Average Length of Hospital Residence during the Present Admission of All Readmissions in Residence on September 30, 1936*

PSYCHOSES	Number			Average Net Hospital Residence in Years		
	M.	F.	T.	M.	F.	T.
With syphilitic meningo-encephalitis	37	8	45	4.48	5.98	4.75
With other forms of syphilis	3	1	4	9.16	.45	6.98
With epidemic encephalitis	2	1	3	3.00	4.50	3.50
With other infectious diseases	—	1	1	—	2.50	2.50
Alcoholic psychoses	48	6	54	8.82	10.83	9.04
Due to drugs, etc.	2	—	1	22.50	—	22.50
Traumatic psychoses	—	1	1	6.00	—	6.00
With cerebral arteriosclerosis	15	7	22	3.95	4.62	4.16
With other disturbances of circulation	—	1	1	—	.45	.45
With convulsive disorders (epilepsy)	3	1	4	10.83	17.50	12.50
Senile psychoses	6	13	19	5.66	5.19	5.34
Involutional psychoses	4	6	10	6.00	14.50	11.10
Due to other metabolic diseases, etc.	—	1	1	—	7.50	7.50
Due to new growth	1	—	1	.45	—	.45
With organic changes of nervous system	3	7	10	3.81	2.20	2.69
Psychoneuroses	4	5	9	7.00	4.89	5.82
Manic-depressive psychoses	35	42	77	6.77	9.18	8.08
Dementia praecox	189	311	500	12.12	10.37	11.03
Paranoia and paranoid conditions	6	22	28	10.83	8.90	9.31
With psychopathic personality	4	7	11	9.48	3.91	5.94
With mental deficiency	30	33	63	10.95	9.16	10.01
Without psychoses	3	3	6	.45	.45	.45
Total	395	477	872	9.58	9.48	9.53

TABLE 20. *Family Care Statistics for Year Ended September 30, 1936*

	Males	Females	Total
Remaining in Family Care September 30, 1935	23	80	103
On Visit from Family Care September 30, 1935	3	23	26
Admitted to Family Care during the Year	21	84	105
Whole Number of Cases within the Year	44	164	208
Discharged from Family Care within the Year:	20	78	98
Lied	—	1	1
Discharged	1	2	3
Transferred	—	1	1
From Family Care to Escape Status	—	1	1
From Family Care to Visit Status	7	37	44
Returned to Institution	12	36	48
Returned to Institution from Escape	—	1	1
Returned to Institution from Visit	3	14	17
Remaining in Family Care September 30, 1936	24	86	110
On Visit from Family Care September 30, 1936	4	21	25
Average Daily Number in Family Care during Year:	21.33	83.17	104.50
Supported by State	18	62	80
Private	6	24	30